The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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MR. JAMES H. CROFTS, STOCK AND SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING STOCKS and SHARES (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in STOCKS and SHARES not having a general market value.

Every Friday a general and reliable List issued (a copy of which will be forwarded on application), containing closing prices of the week.
MINES INSPECTED.

BANKERS: CITY BANK, London—SOUTH CORNWALL BANK, St. Austell.
TELEPHONE NUMBER 1003.

FOR SALE, SHARES in the following MINING COMPANIES:—

Asia Minor.	Guinea Coast Gold.	Rio Tinto.
Akankoo, fully paid.	Great Laxey.	Ruby.
ditto, 17s. 6d. paid	Gunnislake (Clitters)	Rhodes Reef.
Almada.	Hoover Hill.	Richmond.
Bedford United.	Home Mines Trust.	Roman Gravels.
Bratsberg.	Indian Consolidated	Schwab's Gully.
Cankim Bamoo.	Indian Glenrock.	Spitzkop.
Carn Camborne.	Javali.	South Caradon.
Callao Bis.	Kapanga.	South Condurrow.
Chile Gold.	Killifreth.	South Darren.
Colombian Hydraulic.	Kongsberg.	South East Wynaad.
Consolidated.	La Plata (New).	South Devon United.
California.	Last Chance.	South Penstruthal.
Colorado.	Leadhills.	Tambracherry.
Canada Copper.	Lisbon-Berlyn.	Tankerville Gt. Con.
Chontales.	Marke Valley.	Tolima A.
Cor. South Australian Copper.	Michipicoten.	ditto B.
Denver.	Mona.	Transvaal Gold.
Devala Moyar.	Mounts Bay.	Tresavean.
Devon Consols.	Mysore Gold.	Trevaunance.
Devon Friendship.	New Caradon.	United Mexican.
Devon United.	New Callao.	Victoria Gold.
Dolcoath.	New Emma.	Van.
Don Pedro.	New Quebrada.	Wheal Agar.
Drakewalls.	North Blue Hills.	Wheal Basset.
Duchy Peru.	New Kitty.	West Callao.
East Blue Hills.	Nouveau Monde.	West Phœnix.
Eberhardt.	North Penstruthal.	West Caradon.
East Caradon.	New West Caradon.	West Crebor.
East Lovell.	Old Shepherds.	West Polbreen.
East Wheal Rose.	Organos.	West Kitty.
Ecton.	Orita.	West Poldice.
Flagstaff.	Oscar.	Wheal Coates.
Frongoch.	Potosi (Old).	Wheal Crebor.
Frontino.	Port Phillip.	Wheal Jane.
Goginan.	Parys Copper.	Wheal Kitty.
Gold Coast.	Phœnix United.	Wheal Silver & Lanteglos.
Grogwinion.	Panuicillo.	Wynaad Perseverance
	Prince of Wales.	
	Pestarena.	

. ANY OF THE ABOVE SHARES WILL BE SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.
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JAMES H. CROFTS, 1, FINCH LANE, LONDON.

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. SHARES IN THE ABOVE SOLD FOR FORWARD DELIVERY ON DEPOSIT OF TWENTY PER CENT.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.
ESTABLISHED 1842.

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ESTABLISHED 1867.

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TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS
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50 Bratsberg.	10 Great Laxey.	50 Polberro.
100 Birdseye Creek.	100 Home Mines Trust.	30 Panuicillo.
150 Chontales.	25 Killifreth.	100 Pen-yr-Orsedd.
75 Colombian Hydraulic	50 Kapanga.	25 Roman Gravels.
100 Chile Gold.	100 Lake Superior.	50 Ruby.
25 Colorado.	40 Leadhills.	40 Richmond.
120 California Gold.	150 La Plata.	100 South Caradon.
20 Copiapo.	58 Lisbon-Berlyn.	50 Trevaunance.
50 Callao Bis.	20 Minera.	15 Tolima A.
2 Doicoath.	50 Montana.	250 Tocopilla.
20 Devon Consols.	100 Mounts Bay.	50 United Mexican.
100 Duchy Peru.	100 New Callao.	100 West Callao.
100 East Wheal Rose.	200 Nouveau Monde.	50 Wheal Coates.
3 East Pool.	50 N. Trumpet Consols.	70 West Godolphin.
150 Eberhardt.	25 New Kitty.	15 Wheal Grenville.
25 Ecton.	50 Organos.	10 West Kitty.
75 Frontino.	25 Orita.	50 Wheal Crebor.
40 Frongoch.	80 Old Shepherds.	75 West Polbreen.

N.B.—Prices of the above on application, or offers may be made. Several lots of shares in this list are for sale considerably under the prices at which they are quoted in Circulars and elsewhere.
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ESTABLISHED 1867.

BRITISH AND FOREIGN MINING OFFICES.
MESSRS. PETER WATSON AND CO.,
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OLD BROAD STREET, LONDON, E.C.
BANKERS: THE ALLIANCE BANK (Limited).

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BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C.

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TRANSACTS BUSINESS at close prices in all CORNISH MINES.
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Established Twenty-five Years.
BANKERS: LONDON JOINT-STOCK.

POLBERRO, ST. AGNES.
The shares of this mine are in favour, and will advance probably to a very high figure. The mine has been inspected by gentlemen who are well known, and whose opinions are universally respected. Mr. REYNOLDS will be happy to furnish the particulars of their report, and to give to his correspondents any information in his power. The books of the company and all other particulars are open for inspection at the company's offices. The management is the same as that of West Kitty, and the property promises to be of a very high order. Mr. REYNOLDS directs attention to the fact that those who have purchased the shares can already obtain a fair profit. Mr. REYNOLDS further directs attention to the fact of his having been the first to introduce West Kitty, under very similar circumstances to those which now characterise Polberro, St. Agnes, and Mr. REYNOLDS with equal confidence recommends the latter company's shares. West Kitty, with at present 12s. per share paid, returns 30s. per share per annum as a minimum dividend with every prospect of further increase. When West Kitty shares had only 2s. per share paid they were at a premium of £2 each.

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40 California Gold.	20 Leadhills.	20 Ruby.
25 Callao Bis.	60 La Plata.	15 Richmond.
40 Chile Gold.	20 Mounts Bay.	25 South Caradon (Ltd.)
100 Chontales.	100 Nouveau Monde.	50 Tregontrees.
20 Colorado.	20 Organos Gold.	20 United Mexican.
25 Devon Consols.	25 Old Shepherds.	25 Wheal Crebor.
20 East Rose.	10 Panuicillo.	20 Western Andes Gold

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Business in the shares either as buyer or seller.
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SPECIAL BUSINESS in the following:—

40 Akankoo.	60 Chile Gold.	80 La Plata.
70 Birdseye Creek.	90 Chontales.	60 Organos.
30 Bratsberg.	30 Colorado.	40 Oscar Gold.
150 Callao Bis.	20 Devon Consols.	30 Wheal Crebor.

SHARES WANTED:—

50 Bratsberg.	50 Montana.	40 Tolima.
40 Chile Gold.	100 Orita.	70 Tresavean.
30 Leadhills.	30 Rio Tinto.	60 Victoria Gold.

Sellers should state whether for cash or account, and name their price.
Fortnightly accounts opened in Home Railways, Foreign Bonds, American and Canadian Railways, on receipt of the usual cover.
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MINING AGENT, STOCK AND SHARE DEALER,
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MR. ALFRED THOMAS,
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SPECIAL BUSINESS in all Home and Foreign Mines at close prices.
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SHARES SOLD for forward delivery in one to three months upon usual deposit.
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BANKERS: CITY BANK, Threadneedle-street, E.C..

MR. J. GRANT MACLEAN,
SHAREBROKER AND IRONBROKER, STIRLING, N.B.,
Refers to his Share Market Report on page 749 of to-day's Journal.

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TRUST MORTGAGE AND INVESTMENT COMPANIES PAYING FROM FIVE TO TEN PER CENT.
Further fall in the value of money. Reduction in the Bank rate. Reduction in the rates allowed on deposits.
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Mines inspected at home or abroad. Miners, Engineers, and Mechanics engaged for service in Foreign Mines. Indents for Machinery and Materials received and placed in best markets. Mining Plant and Machinery safeguarded and sold either by Public Auction or Private Contract.
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ESTABLISHED 1866.—THIRTEEN YEARS IN CORNWALL.
SAMUEL JAMES, STOCK BROKER AND MINING SHARE DEALER, 14, ANGEL COURT, LONDON, E.C.
Member of the Redruth Mining Exchange.
Those who wish to buy or sell any mining shares should consult Mr. JAMES. Mr. J. devotes his entire attention to home and foreign mines, and places his special information at the disposal of his clients. That mining offers undoubted advantages for quick returns no one can deny. Look at the enormous sums of money paid in dividends by home and foreign mines. A large number of wealthy families owe their present proud positions to adventuring in LEGITIMATE MINES. With a better price for metals many of the smaller priced shares would immediately advance some hundreds per cent.
OSCAR GOLD SHARES SHOULD BE BOUGHT AT ONCE.
There are many mines worth attention, as proceedings of recent shareholders' meetings prove beyond doubt. During the last 40 years there has no such opportunity presented itself as the present for investment in British mines. Metals are certain to advance. In well-informed circles no doubt is entertained on this point. Buyers must not further delay orders.
See Selected List published by S. JAMES, 14, Angel-court, London, E.C.
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15 Bedford United.	50 South Caradon.	100 Colombian Hydraulic.
15 Carn Camborne.	10 South Condurrow.	100 Corp. Sth. Austr. Cop.
5 Cook's Kitchen.	100 South Darren.	50 Denver Gold.
100 Collacombe Consols.	23 South Devon United.	50 Flagstaff District.
25 D'Eresby Mountain.	10 South Frances.	20 Frontino.
10 Devon Consols.	150 Tamar.	40 Gold Coast.
50 Devon Friendship.	75 Tresavean.	50 Hoover Hill.
20 Devon United.	30 Tankerville Gt. Cons.	100 Indian Consolidated.
50 Drakewalls.	20 Trevaunance.	100 Indian Glenrock.
5 Doicoath.	80 West Caradon.	15 Javali.
110 East Blue Hills.	50 West Crebor.	50 Kohinoor B.
25 Ecton.	80 West Gonamena.	100 Kapangs.
50 East Caradon.	9 West Kitty.	45 La Plata
50 East Wheal Rose.	25 West Poldice.	50 Last Chance.
16 Frongoch.	20 Wheal Basset.	50 Lisbon-Berlyn.
100 Goginan.	100 Wheal Coates.	20 Montana.
10 Great Laxey.	50 Wheal Crebor.	30 New Emma.
20 Gunnislake (Clitters),	100 Wheal Jane.	100 Nouveau Monde.
10 Great Holway.	25 Wheal Silver & Lanteglos.	100 Oscar Gold, 7s. 6d. pd
100 Home Mines Trust.		50 Organos.
25 Killifreth.		40 Orita.
20 Kit Hill Great Cons.	300 Antioquia.	50 Potosi, New.
20 Kitty St. Agnes.	50 Asia Minor.	15 Port Phillip.
80 Mounts Bay Consols.	25 Akankoo (fully paid).	20 Panuicillo.
25 New Kitty.	50 Birdseye Creek.	103 Ruby & Dunderberg.
50 New Caradon.	100 Bratsberg.	20 Richmond.
100 Old Gunnislake.	50 Cartago, 7s. 6d. paid.	200 Tacquah.
75 Old Shepherds.	100 Cankim Bamoo.	35 Tocopilla.
10 Phœnix United.	10 Copiapo.	10 Tolima A.
20 Polberro.	40 California Gold.	100 Transvaal Gold.
50 Prince of Wales.	50 Callao Bis.	20 United Mexican, New
50 Parys Copper.	100 Chile.	100 Victoria Gold.
20 Roman Gravels.	25 Chontales.	50 West Callao.

. S. JAMES can buy or sell any of the above shares. Correspondence invited. Trustees, executors, and others will find their duties considerably lightened by submitting schedule of shares held to Mr. JAMES, who will return the same by next post with market values attached.
Orders by letter or telegram promptly attended to. Speculative accounts not opened on any terms whatever. Send for selected list of Mines. CLOSING PRICES issued every Tuesday and Friday.
TELEPHONE No. 212.
BANKERS: IMPERIAL BANK, Lothbury, E.C.

MECHANICAL ENGINEERING OF COLLIERIES.

UNDERGROUND HAULAGE.

By C. M. PERCY, Mem. Inst. Mech. Eng., F.G.S., Consulting Engineer, Wigan; Author of "Winding and Overwinding, Improvements in Colliery Winding, Colliery Ropes, their Use and Abuse, &c., &c."

HADFIELD'S STEEL CASTINGS FOR COLLIERY USE.

Whilst engaged upon these articles on haulage, it has repeatedly been suggested that some reference should be made to the growing importance and increasing adoption of cast-steel as a material for colliery purposes generally, and for hauling appliances especially.

It was well said that the early times, dating far back through the centuries, formed the age of bronze, and that the last two or three hundred years, leading up to our own time, have been the age of iron. We have already well commenced—and ere many years have passed away, iron will practically have become historic, as bronze has done, and we shall be living in—the age of steel.

Anxious to supplement one's own practical experience with that personal observation of actual processes essential to thorough knowledge, the writer has upon more than one occasion of late found himself in the great centre of industry, Sheffield, which, although scarcely fair to look upon from an artistic point of view, is monarch of the steel trade, and whilst providing food for over 300,000 people, sends its products all over the globe. Sheffield, the noisy and dark-visaged city of steel, does everything with its special commodity that the skill of men can accomplish, from the massive armour plating, over 2 ft. in thickness, to coat the sides of our ships of war, and against which shot and shell hammer in vain, to the delicate needle plied by some fair hand, or from the locomotive engine and its thousands of miles of road, to the penknife for the pocket of the urchin enjoying his golden days at school.

But it is none of these we care so much about just now. We want to speak of wheels, axles, pedestals, pulleys, rollers, &c., so essential in colliery hauling operations. When we consider that in our mines we have more hundreds of tubs or wagons than we raise in hundreds of tons per day, and that in very many of our hauling arrangements, especially the systems we have so recently been describing, we require for good working a pulley or roller for each few yards of working way, we see at once the immense importance of a material which will be durable, and thus avoid the delay and expense inevitable with constant renewals.

Until a few years ago all wheels and all pulleys were of cast-iron, a treacherous material at best, and liable to rapid wear. Fitted with this, the pulleys and the wheels would by accident or wear, or both, require almost complete renewal each two or three years. In many collieries where very heavy work is experienced it is found necessary to renew the wheels every nine or ten months owing to the constant breakages, also that rollers and pulleys are often sawn through in as many weeks. This, of course, could not go on; some other material was bound to take its place. Such material is taking its place, and in a comparatively short time, judging from the effect already produced, cast-steel will be triumphant, and cast-iron, for such uses at any rate, pass out of existence.

Great difficulties have had to be overcome and many improvements made, and whilst admitting fully that many hands and many minds have been engaged in various parts of the kingdom, it is only in the inevitable fitness of things that Sheffield should rule the roost. No man even here has done more than Mr. HADFIELD, founder of the Hadfield Steel Foundry Company, and foundry which bears his name, and whose specialities are appreciated in every land.

The writer has been fortunate in some practical experience with these productions, and his correspondents at home and abroad being for the most part, similar in this respect, he, whilst speaking in the highest terms of all makers aiming at excellence in this matter, will confine his remarks here to Hadfield's, being those he knows most about. He also feels fully justified in so doing, owing to the varied and long experience this firm have had, making steel castings their sole speciality since the founding of the business. The numerous awards at different "World's Fairs" are also a flattering testimonial to the high quality of their productions—viz., gold medal Paris, 1878, gold medal Melbourne, 1881, gold medal Madrid, 1883, special diploma of honour and silver medal Sydney, 1880, highest awards at smaller exhibitions in this country. Also the highest award for steel castings at the Calcutta Exhibition this year—namely, first-class certificate and a silver medal.

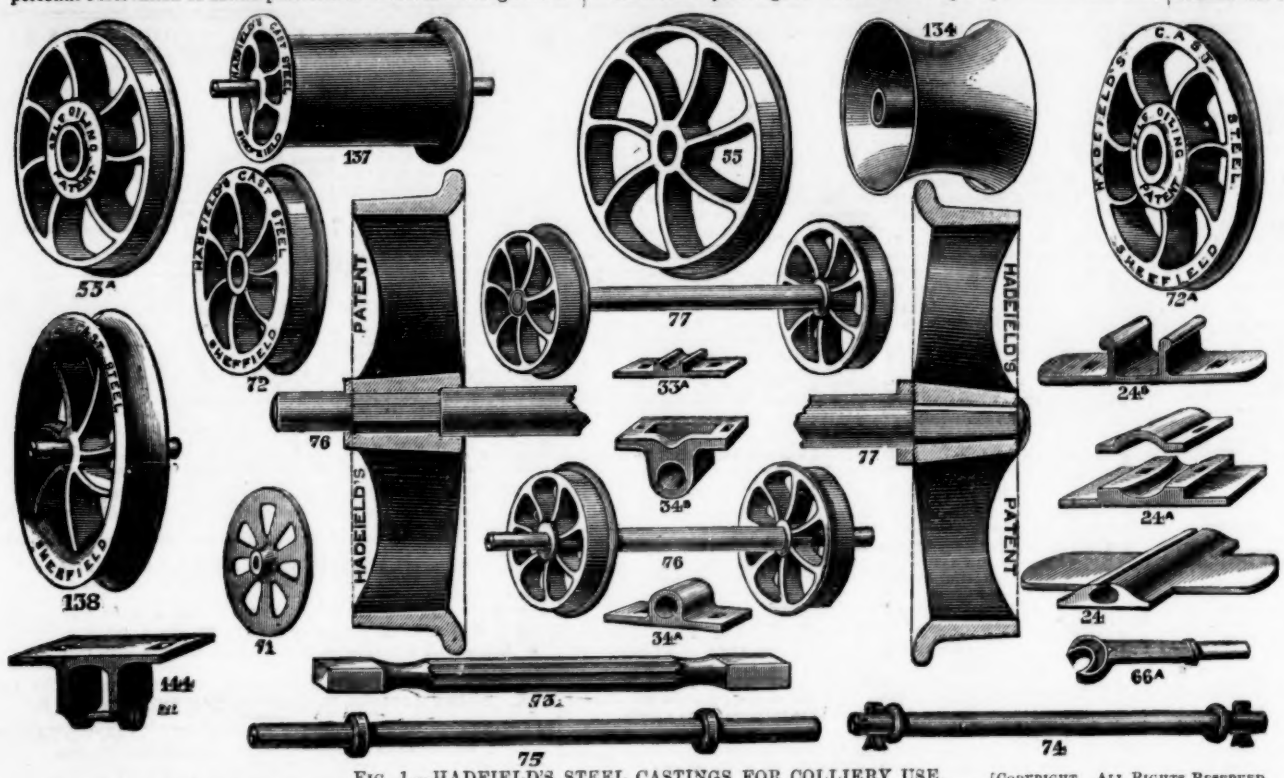


FIG. 1.—HADFIELD'S STEEL CASTINGS FOR COLLIERY USE. [COPYRIGHT. ALL RIGHTS RESERVED.

Reference to Sketches.—55A, self-oiling single flanged wheel; 138, equal flanged pulley, armed; 144, pedestal; 137, equal flanged roller, armed; 72, quarry wheel, double flanged; 71, plate bogie wheel; 76, two views, mining wheels and axles, outside bearings; 55, wagon or tub wheel; 77, two views, mining wheels and axles, inside bearings; 33A, open pedestal; 34B, 34A, light pedestals; 73, special steel axle, square ends; 75, special steel axle with solid collars; 134, frame; 74, special steel axle with cottars and washers; 72A, self-oiling double flanged; 24, 24A, 24B, cage guides; 66A, spanner.

The works, very properly somewhat kept from the vulgar gaze, are most complete and interesting to the privileged visitor, and have on the occasion of more than one visit, afforded pleasure and instruction to the writer. Well-appointed establishments for every branch of the industry, divided into distinct departments, each superintended by efficient foremen, ensure an accuracy and excellence in manufacture not easy to be surpassed.

In addition to the well-equipped foundry, containing steam cranes capable of lifting 15 to 20 tons at once, the Hadfield Steel Foundry Company have a first-class machine shop, fitted with the latest modern improvements and capable of turning out all kinds of finished work. This shop contains several overhead rope travelling cranes on the newest principles, and such is their simplicity that any ordinary unskilled labourer without any assistance can lift and take from one part of the shop to another loads of 10 tons with perfect ease and safety; also planing, drilling, and slotting machines, hydraulic and steam presses, steam hammers, 3 and 10-ton portable steam cranes, lathes of all sizes up to the massive tool weighing close upon 30 tons. This will give a rough idea of the plant necessary to the production of steel castings, and show that Messrs. Hadfield have fully laid themselves out to do the work well and efficiently. The electric light is being thoroughly tested here, and, so far, has been found efficient and superior to the old systems.

It is no part of our present purpose to write a description of the process whereby the steel itself is manufactured (that may come at some future time when a kindred work to this is written of the engineering of iron and steel). We suppose the cast-steel ready to our hands, and the quality of this cast-steel makes all the difference between success and failure throughout the manufacture. There is "steel, and steel," and on the quality we use will depend the properties of toughness, durability, density, and soundness for which Hadfield's have obtained that to which we all aspire—a good name. This has, of course, only been arrived at by great study and application, and by making use of all the latest improvements and appliances. The "rule of thumb" is not considered the only guide at these works, for we were much pleased to see a well-appointed laboratory, so that chemical tests and analyses can at once be brought to bear. Thus being able to test all raw material as well as the finished products enables this firm to make a thorough uniform material with almost absolute certainty, and thus avoid so many of the mishaps which, without such appliances, were inevitable, and have brought many well-intentioned makers to grief.

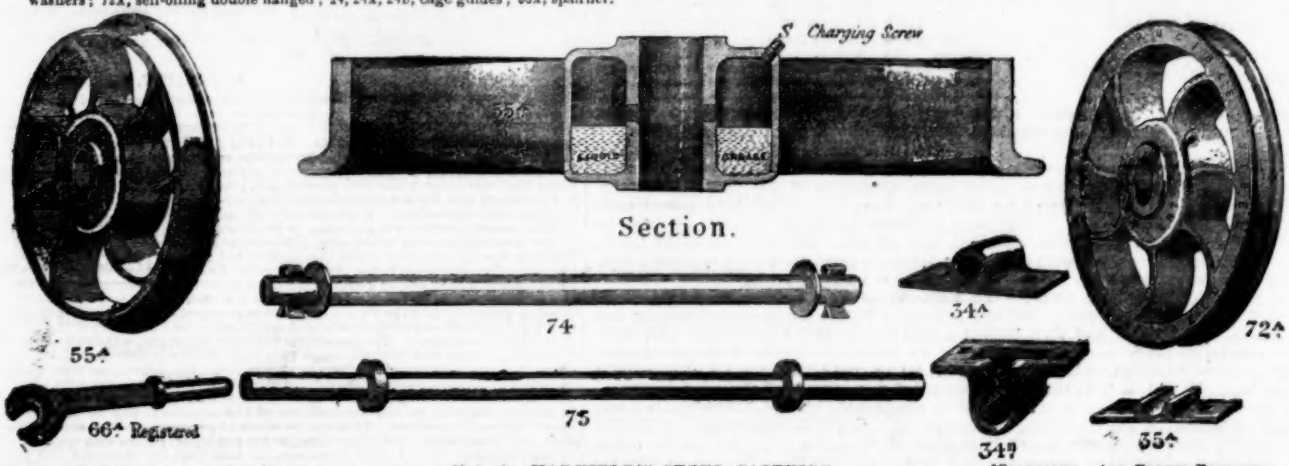
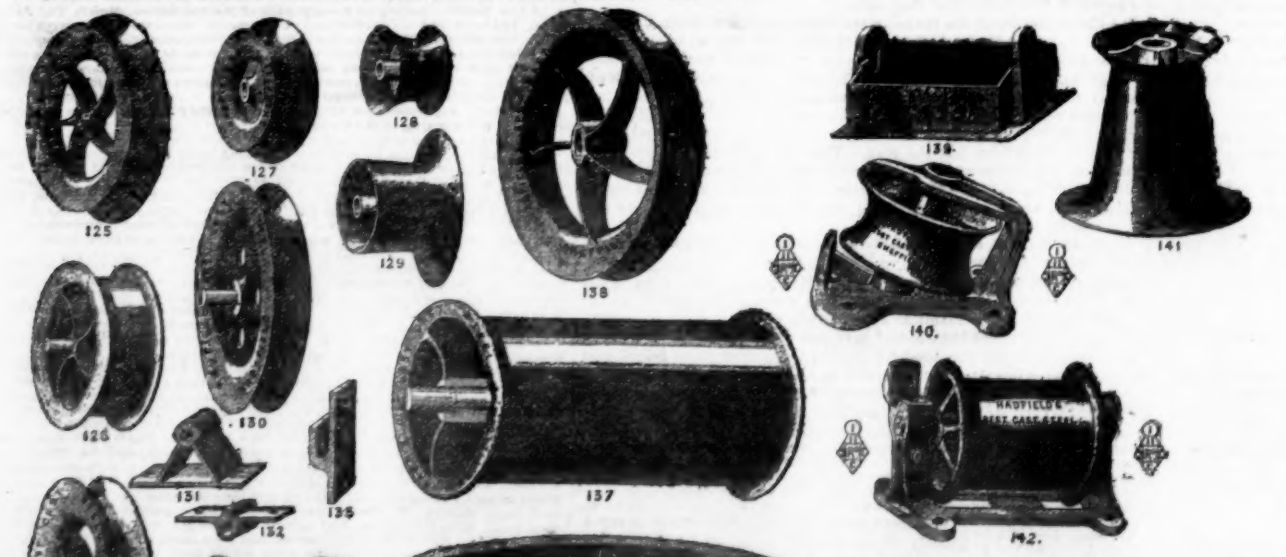


FIG. 3.—HADFIELD'S STEEL CASTINGS. [COPYRIGHT. ALL RIGHTS RESERVED.

Reference to Illustrations.—55A (2 views, perspective and section) self-oiling single flanged wheel; 72A, self-oiling double flanged wheel; 34A, 34B, 35A, light pedestals; 74, special steel axle with cottars and washers; 75, special steel axle with solid collars; 66A, spanner.

Mechanical tests are also very freely used, and comprise over 200 different specimens by Her Majesty's Government, Kirkaldy, Prof. Huntington, Prof. Kennedy, &c., for tensile, elongation, compression, bending, and drop tests. To give some idea of what has been accomplished with unhammered steel castings, as high as 40 tons to the square inch tensile strain with 20 per cent. elongation has been obtained, and with their special mild hammered steel a tensile strain of 31 tons to the square inch with 30 per cent. elongation, a somewhat startling advance on the steel of even seven or eight years back. Also a special hard quality of unhammered steel castings has given as much as 65 tons per square inch tensile strain with 6 per cent. elongation, approaching within a very close distance of Whitworth's expensive compressed steel, a wonderful result, seeing this material had never had any mechanical treatment whatever; but was simply in its cast state, of course properly annealed and passed through their special processes.

The steel castings as they leave the moulds do not appear so smooth as cast-iron, but when it is borne in mind that the temperature of ordinary molten cast metal is about 2000° Fahr. against molten cast-steel, 3000°, it will be readily seen what greatly increased difficulties steel founders have to contend with in this point. Naturally, cooling down from this intense heat means greater contraction; consequently all patterns for steel castings have to be made ¼ in per foot larger than the finished castings are required to be—that is, double the amount for cast-iron. Messrs. Hadfield pointed out a large hydraulic cylinder, 22 ft. in length, the mould for which had actually to be 22 ft. 6 in., thus having to contract 6 in. when set as compared with its molten state. It will therefore be seen what a serious obstacle this increased contraction is to deal with, and unless the material is very equally proportioned the castings are liable to pull themselves in pieces when cooling. Annealing extending over a considerable period gives the castings a toughness and density and nature, and the particles an unstrained connection with each other, which equips them to meet the various forces to which they will be opposed. Then—as regards smaller articles—comes the cleaning, simple and



COPYRIGHT.] FIG. 4.—HADFIELD'S STEEL CASTINGS FOR COLLIERY USE. [ALL RIGHTS RESERVED.

Reference to Illustrations.—125, unequal flanged pulley, armed; 126, barrel pulley, armed; 127, unequal flanged pulley, disc; 128, pulley, small disc; 129, pulley, special for curves; 130, equal flanged pulley, disc; 131, 132, 135, pedestals; 133, chain pulley, armed; 134, pulley, large disc; 136, break pulley, armed; 137, equal flanged roller, armed; 138, equal flanged pulley, armed; 139, roller frame; 140, pulley and frame for curves; 141, unequal flanged horizontal roller, armed; 142, self-oiling roller and frame; 143, flangeless roller, hollow face, armed.

thorough, a mere rapid motion of a number of miscellaneous articles within a revolving drum, ensuring by their contact with each other a freeing from sand and clearing of rough places. The noise in this department is perhaps not pleasant, but it was extraordinary to notice the severe tests to which the castings are subjected in this revolving machine being rolled about for more than an hour together. Similar articles in cast-iron would have been smashed to pieces, thus showing even at this early stage the great difference between the two materials.

Steel castings of every description are to be seen in course of manufacture, comprising those for railways, tramways, hydraulic and other engineers, agricultural and general castings, machine moulded gearing, &c., ranging from a few pounds in weight up to 6½ and 7 tons each. Those castings forming parts of machinery that have to be turned and bored then pass on for manufacture in the various lathe, planing and slotting, and drilling machines before referred to. But for general work our wheels, rollers, pulleys, and pedestals are now practically ready for being fitted up. There is scarcely anything in machinery but can be made of this material, and Hadfield's large works show how extensive its application has become. Their pattern stores alone contain over 15,000 different models of parts of machinery, &c. We, however, deal in this article simply with colliery appliances. The figures accompanying this article show in all fulness the varieties of wheels and axles, rollers, pulleys, cage guides, pedestals, &c., produced under this process. For greater convenience the various articles shown in the several figures have numbers corresponding with the numbers in the makers' establishment, and the reference describes each article.

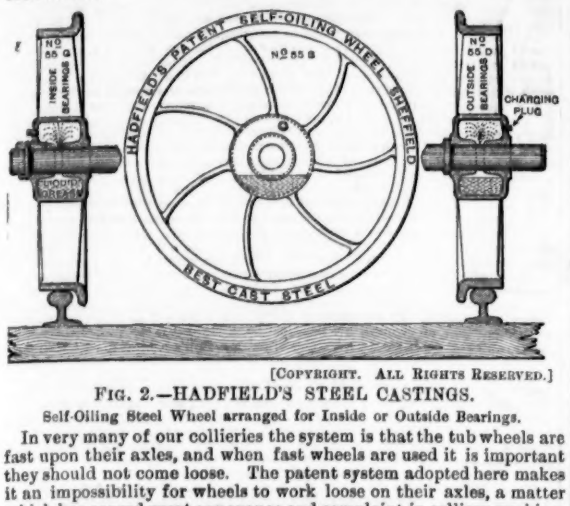


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FIG. 2.—HADFIELD'S STEEL CASTINGS.

Self-Oiling Steel Wheel arranged for Inside or Outside Bearings.

In very many of our collieries the system is that the tub wheels are fast upon their axles, and when fast wheels are used it is important they should not come loose. The patent system adopted here makes it an impossibility for wheels to work loose on their axles, a matter which has caused great annoyance and complaint in colliery working, and by this patent system of Hadfield's alone over a million wheels have been fitted up, apart from wheels bored and keyed on, wedged on, &c., &c., a fact which we think speaks for itself, as many systems tried in collieries have proved total failures—in fact, we saw at Messrs. Hadfield's works several samples of these systems which have been applied to colliery wheels and axles, and have been returned to them totally useless, and as scrap. The figures show sections of wheels and axles fitted together for inside and outside bearings. The arrangement is that the round portion of the axle—*i.e.*, the body itself, enters the wheel a certain distance with its full strength, by this means avoiding the weakening which attends all axles with sharp collars fitted against the wheel, &c. The wheels are forced on their axles by powerful machinery capable of exerting a pressure of 30 tons (this pressure varying according to the diameter of wheel and axle), after which in the case of inside bearings the end is securely riveted over. The axle ends being forged larger than the hole in wheel when the axle is forced by the pressure and passes through the said hole so close is the fit that it takes off shavings from the inside of wheel boss, thus proving and ensuring two purely metallic bearings or surfaces, and entirely preventing the possibility of grease or oil working in between the two, and causing the wheels to come loose.

In other colliery districts, especially where large tubs, and consequently large wheels, are used, loose wheels are often required, and with these the all-important matter is oiling—important, because of the enormously increased load which unoiled wheels generate, and important because an unoiled bearing wears itself rapidly away. And we do not want spasmodic oiling, which, flooding the bearing for a few minutes, leaves it practically without oil for hours together. But we want continuous and sufficient lubrication. This is effected by having the boss of the wheel hollow, and within this hollow part oil is placed, reaching about up to the under side of the axle. The axle does not run in the well of oil, but the revolution constantly throws up sufficient drops, which, falling upon the bearing, keep it well lubricated. By these means a bearing is kept free from dirt, and a weekly or fortnighly charging for oil suffices. So far we have dealt with wheels, and in addition to the difficulty about looseness and oiling, these must be such as will not wear away rapidly and not break. The best proof of this is that wheels put on more than a dozen years ago are running yet, and breakages are an absolute rarity. One set fell down a shaft nearly 500 yards deep a short time ago, and although the wheels were of a light pattern, weighing only 17 lbs. each, notwithstanding this excessively severe test there was not even the slightest appearance of crack or fracture. The writer has seen wheels, not selected, but chosen at hazard from a heap, placed upon an anvil cold and hammered into the form of a polygon without breaking, and there is no difficulty in then hammering such a distorted wheel back into proper working shape. One firm in South Yorkshire, before adopting steel wheels and axles, and in order to carefully test the merits of different systems of cast-steel, malleable, and other wheels, kept a careful record of breakages, &c. The cast-iron wheels, of course, rapidly broke, two of the better ones of the other kinds gave 10 per cent. breakages, whilst not a single one of Hadfield's wheels and axles gave away. This firm, therefore, entirely adopted this system, and have now over 20,000 wheels and axles upon this patent system in daily use. One set of 9-in. wheels has been running constantly day and night for five years, has run 41,000 miles, carried 10,000 tons of coal, has made nearly 100,000,000 revolutions, and only worn ¼ in. on the tread. A 30-in. wheel has run 11,000 miles, carried 33,000 tons of earth, and is only worn ⅛ in. on the tread.

The patent self-oiling steel wheel shown amongst the figures has had claimed for it (and has stood all tests) the following advantages:—

1st.—Not more than one-third of the oil or grease is required as compared with the ordinary method.

2nd.—The bearings never become dry, the revolving of the wheel leads out the oil as required, and immediately the tub or wagon stops the lubricator ceases its action, thus causing no waste. The result of all this is less wear and tear, and great saving in haulage power caused by there being so much less friction.

3rd.—No waste of grease can occur, no matter in what position the wagon may be placed when discharging its contents, even if upside down, and when the wagons are not in use it is impossible for any grease to escape, as it is all stored below the outlet.

4th.—When once these wheels have been charged with grease, which can be done by any inexperienced person, they do not require any attention or regreasing whatever for several weeks or even months afterwards, in proportion to the distance travelled.

5th.—These wheels are readily fixed to any description of iron or wood tub or wagon now in use, whether the wheels are upon the inside or outside of the frame,

6th.—They are simple in construction, have no detail, and are not liable to get out of order.

7th.—They possess great strength, durability, and extreme lightness.

The rollers and pulleys are well illustrated in the various figures; they have on many grounds become exceeding popular, and the reason is not far to seek.

An important item in the renewal of mining plant is the cost of wire-ropes for inclines, endless ropes, and other systems of haulage power. The real cause of this expense is often not that the rope itself has been inferior, but has been severely punished by being sawn over heavy, unequally thick, and lob-sided rollers and pulleys, which frequently remain fixed, heavy side downwards, until they are completely sawn through by the constant friction of the passing rope, thus acting similarly to an endless band saw, consequently rapidly destroying the skin, fibre, and strands of the said rope, and requiring increased haulage power. Steel rollers and pulleys are claimed to have the following advantages:—

1st.—They are nearly one-half lighter than cast-iron.

2nd.—Being better made, equally balanced, and never lob-sided, the instant the hauling rope touches them they readily revolve, thus avoiding all grinding or sawing by the rope, and consequently save power, and prolong life of ropes.

3rd.—They are much stronger, and cannot be broken by ordinary means, say, by the sudden passing of chains over them, such as frequently connect the rope to the tub or wagon, or hang loose from the end of passing tubs or wagons.

4th.—They have great durability, and will outlast 10 or 12 cast-iron pulleys or rollers.

5th.—By reducing wear and tear to a minimum they effect a great saving in working expenses.

6th.—Cast-steel spindles of special good quality are carefully fitted in these rollers, and add greatly to their life.

Hadfield's have in stock over 1100 different sized wheel patterns, from 6 to 36 in. diameter, of varying widths of tread, flanges, bosses, &c., and yet different styles are wanted almost daily. The reason is, we colliery people all have different ways of doing our work. In some special cases there is nothing we can lay our hands upon that meets our requirements; then a special design is inevitable. But generally we should be able to find an appliance ready to our hand, actually better fitted to our wants (having borne the tests of experience) than anything we could suggest.

The methods of securing the wheels upon their shafts give the most excellent results. For small wheels the system has already been described. For larger wheels they are forced on the axles by powerful hydraulic machinery exerting a pressure of 30 to 120 tons, varying according to the diameter of the wheel and axle, after which the axles, if necessary, may be securely riveted. This severe test ensures every wheel being perfect before leaving the works, and the machine secures truth as well as exactness of gauge. And so absolute is the accuracy in the workmanship that there is absolute interchangeability—a point which is considered of the highest importance in some quarters, but is scarcely an essential with these steel wheels, because they neither break nor come loose. Experiments were however, specially made in a wheel and axle which were taken apart and refitted—the wheel on different axles, and the axle in different wheels—no less than five times, thus fully proving their interchangeability.

The self-oiling roller boxes (Hadfield's registered pattern) also well shown amongst the illustrations, are very simple, very effective, and consequently are becoming very popular. They are easily fixed, only need oiling about once in several weeks, are very free from friction, work easily, and when a pulley wants changing—which is not often, as the spindle on which it is mounted is also steel—it can be lifted out in a few moments and another dropped in its place. Of course, the whole fabric—roller, spindle, and frame—are of cast-steel.

Also the "registered" angle pulley and frame is of great advantage in taking ropes round curves. It is very simple in construction, has no parts liable to get out of order, and can be easily greased. The pulleys are interchangeable, and can be renewed at any time. This article is also constructed entirely of cast-steel.

Much, very much more might be said, but the foregoing is sufficient to show what has been and is being done to introduce a material for colliery purposes which, whilst almost everlasting in point of wear, gives a maximum of strength with a minimum of weight, and avoids the manifold troubles with which ordinary colliery appliances are so much identified. Blast-furnaces, too, which have found cast-iron wheels for bogies and for barrows a daily source of accident, keeping a good sized foundry going for renewals, have by the adoption of steel wheels shown that accidents are quite preventable, and renewals absolutely avoided.

The makers of steel castings have worked hard and have exercised never-ceasing ingenuity, they have conquered many prejudices and overcome many difficulties, and now the sun of prosperity, or at any rate, success, shines upon them.

The writer was shown some specimens of a remarkable new material discovered by this firm, known as "Hadfield's patent manganese steel." This steel possesses the special qualities of hardness and toughness combined, and an axe made of same in the rough, never hardened or tempered, had chopped through ½ in. square iron. One of the curious things connected with this steel is that it is non-magnetic, and, as the Engineer of Feb. 8, 1884, remarks, "it is rather curious that the properties herein found should only be now found, and after finding a steel that is at the same time very hard, very tough, not attracted by the magnet and with considerable elongation, we may next expect anything to turn up to upset one's ideas as to the characteristics of steely materials."

The name of Hadfield is inseparably identified with the industry by early and long connection and extensive operations. A production in wheels and axles alone of thousands per week, and an actual output of nearly one and three-quarter millions, combined with the reputation for high-class workmanship acknowledged all over the world is a higher and more substantial form of testimonial than any words which this feeble pen can write.

But the writer bears his personal testimony, gathered from his own practical experience, and the corroboration of his wide circle of friends and connections, and ventures to predict that the steel castings with which Hadfield's Steel Foundry Company and hosts of friendly competitors are honourably associated, will in colliery hauling appliances replace everything for which they can possibly be adapted.

Even now the only reluctance is in consequence of the first cost, but that will not long bar the way. The most inveterate opponent of modern improvements and innovation will in the inevitable course of things be made to see that an article which costs, say, four times as much and wears 20 times as long, and to which accidents are unknown, is far away the cheapest.

Sheffield, and more particularly that portion of it known then, and known still, as Attercliffe, was made famous in the eighteenth century by the operations of Benjamin Huntsman, one of the creators of the steel industry. Hadfield has given this locality an increased reputation in a similar kind of industry more than a century later, and by the combination of rare practical ability and eminent inventive genius has provided for colliery proprietors at home and abroad an excellent material, has founded a large and successful business, and has made a name known and respected in all parts of the world where steel castings have been brought into use.

The following very practical and very easily understood memoranda have been specially drawn up for the information of present and intending users of steel.

1.—There is nothing so dear as inferior cheap steel.

2.—Overheated steel tells its own tale.

3.—The quality of the iron used in steel-making determines its value.

4.—The higher the quality of the iron the better the steel.

5.—Consumers of steel should state the purpose steel is required for; the steel-maker will then state what temper of steel is most suitable.

6.—Phosphor and sulphur are enemies to steel.

7.—Pure fuel is essential to heating or working steel

8.—The peculiarities and treatment of steel require special skill and experience.

9.—The hardening of steel is regulated by its percentage of carbon heating it lower or higher according as it contains more or less carbon. The safest course is to harden at the lowest heat that will give the required hardness.

10.—Hardening cracks more frequently result from irregular heating than from defects in the steel.

11.—All steel requiring hardening should be heated by a slow soaking heat, and never heated higher than what is sufficient to take the temper.

Meetings of Public Companies.

ST. JOHN DEL REY MINING COMPANY.

The half-yearly general meeting of shareholders was held at the Cannon-street Hotel, on Wednesday,—Mr. JOHN HOCKIN in the chair.

The SECRETARY read the notice convening the meeting, and the report of the directors was taken as read.

The CHAIRMAN said: In commenting, as usual, on the several matters contained in the report, the unprofitable nature of the year's operations naturally claims the first attention. A loss of 7845*l.* on the working of the mine during the year is much to be regretted; but there is one consoling point connected with it—that the monthly loss has been much reduced during the latter part of the year. The loss for the first six months was 5766*l.*, and for the second only 2079*l.*; and this last-named sum is in part made up of the extraordinary item of 700*l.* paid for provincial gold tax for 1881 and 1882 hitherto in dispute, the payment of which was only enforced this year, so that the real working loss for the six months is only 1300*l.*, or a little over 200*l.* a month, as against nearly 1000*l.* monthly in the first half of the year. The whole cost of the year, as shown in the comparative statement of expenditure—account No. 5 in the report—is 4000*l.* less than the cost of last year but this year's cost includes the entire cost for labour and materials, of making and erecting the new wheel and pump at the western end of the mine, and the larger portion of the cost of the new hauling-wheel, and other surface machinery, than were charged last year and which, though not strictly working cost, under existing circumstances we have been obliged to charge to revenue. The cost per ton quarried is again lower this year than last. And here, referring again for a moment to the small monthly loss for the last six months, I must in justice remark that it is highly creditable to the management at the mines that such results have been obtained with a net average produce of only 16,600 oits. per month, and I am glad to be able to say that the results for April and May, the first two months of the current year, though the produce has been lower, will be still more favourable, and will show a small profit. It shows that every effort is being made by more automatic means of treatment and other economies, to meet the lessened yield of the mineral. Neither the quantity of stone extracted from the mine nor the quantity stamped has been as large as last year, which, however, were the largest since the mine was re-opened. A very trying dry season followed by unusual floods, which were very destructive to the railway and property generally in the country were the cause. Extremes, whether of drought or wet, are, of course, equally inconvenient where the whole motive power is water. The average yield of the mineral treated has been less than last year by about one-fifth of an oitava, or 12 grains troy per ton. At the Cuiaba Mine the completion of the 40 head stamping mill in February last year has enabled us to keep that mill running the whole year, and to reduce just twice as much mineral as was reduced last year. The yield of the mineral stamped has been not quite one-tenth of an oitava, or 5 grains troy per ton lower than last year, but the reduction appliances have hardly been equal to the increased tonnage stamped. Notwithstanding the low recovery of gold from the mineral, it will be seen that its value exceeded the cost of extraction, and that the latter had been considerably lessened during the latter half of the year. We have told you in the report of the steps we took immediately after the last meeting, to carry out the wishes expressed for the formation of a committee of large shareholders, to confer with the directors on the financial position of the company, and to advise on its affairs. The gentlemen, who were invited to act on the committee, comprised holders of a large proportion of the stock of the company, who had been proprietors of long standing, and though only six consented to serve, they have given much time to their enquiry on all points calculated to inform them as to the true position of the company, its prospects, and requirements, and the advice they have been able to tender, and the conclusions they have arrived at have been most acceptable and satisfactory to the directors. The directors placed before them unreservedly the whole of the London books, as well as the monthly accounts and reports received from the mines, so as to enable them to form an impartial judgment, not even on the manner in which your directors have administered the affairs of the company, but also as to the capabilities of the staff at the mines. After many lengthy meetings and much deliberation with the committee as regards the future of the mines in Brazil, the conclusion was unanimously arrived at that, considering the large size and strong character of the Morro Velho lode, it is imperative that steps be taken to ascertain by sinking as rapidly as possible, whether mineral of a higher auriferous character is underlying the present poor zone; and that, whilst this sinking is being prosecuted, the excavation should be narrowed in the poorer part of the mine, so as to avoid, if possible, the late monthly losses. Instructions to this effect have been sent to the mines. That as regards the Cuiaba Mine, it being evident that the working up to the present time has laid open a very large supply of auriferous pyritic mineral capable of being excavated and treated at a low rate of cost, additional stamping power is all that is necessary to bring the mine into a condition to return profits, and, although pending the providing some further capital there are no funds available for works of any magnitude, the directors considering the matter one of urgency have given instructions for the erection of a further 20-head mill, which will be at once proceeded with. By the mail which arrived last week the board received exhaustive reports on the Cuiaba Mine. They did not arrive in time to be printed and sent out with the report, but they will be printed *in extenso*, and be sent out with the circulars inviting subscriptions for the debentures to be secured on that property, so that subscribers will be able to judge of its value. With regard to these reports the superintendent writes—"They are written by Mr. Michell (the sub-manager in charge), Capt. Rogers (the head mining captain at Morro Velho), and Captain Hodge (the local mine captain at Cuiaba), and from these reports it will be seen that the mine is being opened up and worked in a scientific and masterly manner, and as regards the mine they are all of the same favourable opinion, and state that the quantity of mineral laid open is enormous." To enable the directors to push on the erection of further stamping-power at Cuiaba, as well as to provide capital for the further full development of the mine and surface works, and at the same time to meet any excess of expenditure over receipts at Morro Velho that may occur whilst the present low grade mineral only is obtainable, it is necessary that further funds be provided; and, as we tell you in the report, the board and committee are unanimously of opinion that as the sale of the Cuiaba property, which was proposed by the board at Christmas, was negatived by the meeting, the only other alternative available is to raise the money by debentures, specially secured on the Cuiaba Mine and property. Counsel's opinion has been taken in regard to the issue and mode of securing the debentures, full particulars of which will be given in the circular inviting subscriptions for the same, which will be issued in a few days. In the meantime I may state to the meeting generally that the 75,000*l.* which it is proposed to issue will be secured by a trust deed, of which there will be three trustees—two members of the committee and one director. The debentures will be issued at par, will run five years from date of issue, and rate of interest 7 per cent. Of the 75,000*l.* 50,000*l.* will be offered to present debenture-holders in exchange for the debentures they have, thereby giving them tangible security, and placing them on a par with those who take the new mortgage debentures. The remaining 25,000*l.* will be offered in the first instance to the stockholders of the company, and be allotted as nearly as possible *pro rata*. This will be about 10 per cent. on the stock they hold, and if not taken up will be offered to the public, or be otherwise disposed of by the directors. And I may here mention that both the directors and the members of the committee intend to take their full *pro rata* proportion of the debentures, to be paid for in cash, and to exchange their present debentures for the new mortgage debentures, and the board trust that, considering the small amount to be raised, the proprietors would not allow any of these debentures to go to the public. Acting on a suggestion of the committee, Messrs. Deloitte, Dever, Griffiths and Co., chartered accountants, were associated with Mr. Austin, the auditor in office, in the audit of the accounts. The directors propose continuing this arrangement, and they do not doubt it will work well, and prove satisfactory to the general body of the proprietors; but as it will involve an alteration of the Articles, a special resolution will be proposed for carrying it out at the next half-yearly general meeting.

Mr. PIGGOTT suggested that at a future time they should have a separate account of the working of the Cuiaba Mine.

The CHAIRMAN replied that they would have that done next year.

Mr. TENDRON said that at present everything went to capital account. If there was a loss in the working it went to the capital account, and if there was a profit it went in diminution of capital expenditure. There was no separate account at present. They had the cost of Cuiaba up to the present time, and they would find as much detail as possible given at pages 47, 48, and 49 of the report. Up to the present the mine had been dealt with as most mines were dealt with until they were put into a paying state; but next year they hoped that things would be better, and that the mine would justify a separate account.

Mr. SCHOFIELD would like to know when the additional pumping-wheel would be at work. He saw no prospect of any increased returns until that was done. The way in which the new works had been carried out had been very dilatory and expensive, and he thought that that was the opinion of everybody who knew anything about mining. He thought the board were highly reprehensible for having allowed the delay to occur.—The CHAIRMAN replied that he thought that the new wheel was at work at the present moment.

Mr. SCHOFIELD: Can you give any explanation of a certain rise in the yield?—The CHAIRMAN: We know nothing more of it than you do. It is a telegram.

Mr. TENDRON said that out of the proposed amount to be raised a considerable sum would be spent in developing the Cuiaba Mine. That mine had cost them 65,000*l.* without any charge for management or supervision. The property was bought exceedingly cheap. There was a time when it was tried to float it at 100,000*l.* He supposed 60,000*l.* was to be paid for the mere purchase. There was an adit 1300 ft. long, a level, and 40 stamps, and there was surface machinery, and the mine was capable of turning out 5000 or 6000 tons a month. At least 20,000*l.* would be spent on Cuiaba, and at the present time the order had gone out to put up 20 more stamps. The secret was to work a large quantity of ore, because they could mine it cheaply, and spread the charges over a large instead of a small surface. The assay of the mineral had been about what they were led to expect, and they were told that the mine would turn out about 6000 tons per month. The mineral would be worth about 4 oits. They hoped to get a return of 70 per cent., but up to the present they had only got 50, and the difference between working at 70 and 50 meant working without a profit, or at a very fair profit. The gold was so very fine, and was disseminated so greatly through the rock that it was exceedingly difficult to recover, and to obtain 70 per cent. from pyritic ore was a credit to any establishment.

Mr. STANTON, M.P., said that although he was disappointed at the results of the last year's proceedings they must look upon the fact that during the last six months the loss had been much diminished. So far as the old mine was concerned it appeared to him that they had arrived at a period when it was necessary that further explorations in the shape of boring should be prosecuted with great speed, so that they might know as soon as possible whether it was desirable to continue in depth. Their great hope, he thought, rested in Cuiaba, because as far as they knew it was virgin ground, ground which had great auriferous deposits, and it might happen at some moment they might find some discovery which would give them as quick returns as they had had from the old mine. Their mine had now reached a period of speculation; but it was a good, honest, fair, mining property, and it had as good a prospect as any mine. He was one of those who thought that having derived great dividends, and having had from this mine a good plum for many years they must not look

with despair on a property which had within it the elements of success. He believed that it only required perseverance to achieve good results. So far as the home management was concerned he believed the directors had done everything they could possibly do to satisfy the shareholders. Six months ago a question arose, and the directors at once did what they ought to have done—they called in the assistance of the largest shareholders—and a committee was annexed to the board of directors with the results they had before them. What more could they do than that? A gentleman had suggested that the directors had not prosecuted the erection of the machinery quickly enough. He did not think that anything in the power of the directors in London had not been done, and he felt perfectly satisfied with the course pursued by the board. He hoped that they would discover a rich vein returning 8 oits., and then they would meet with cheerful faces, and their property would be worth what it was years ago.

The CHAIRMAN said the whole matter of the reduction of the ore was undergoing anxious enquiry, not only at the mines but in London. They had consulted men of the highest position, and every investigation was being made that could possibly be made with the view of finding which was the best means of treating the tailings.

Mr. RAWSON said he believed they had in the management of this property some of the most upright gentlemen in the City of London. He was sure that the members of the board and the people at the mine had left no stone unturned, and if they had not made large profits it was not the fault of the management.

The motion for the adoption of the report was then put and carried unanimously.

The CHAIRMAN moved the re-election of Mr. Tendron.—Mr. HARRIS, in seconding the motion, bore testimony to the attention which Mr. Tendron had bestowed on the affairs of the company. He entirely repudiated the notion that there had been any want of vigour in the management of the affairs of his concern.

The motion was carried unanimously, and Mr. Austin having been re-elected the auditor,

A vote of thanks was passed to the Chairman and directors, and also to the management at the mines, and the proceedings then terminated.

RHODES REEF GOLD MINING COMPANY.

An extraordinary general meeting of shareholders was held at the Cannon-street Hotel, on Monday, for the purpose of confirming certain resolutions passed at the meeting held on June 6, relative to the winding up of the company, the appointment of liquidators, and the sale and transfer of all the assets and property of the company to the Devala Moyar Gold Mining Company.

Major-General A. LIGHT occupied the chair.

Mr. A. N. FREWER (the secretary) read the notice calling the meeting.

The CHAIRMAN said: Gentlemen, our proceedings to-day need not occupy much time, the business before the meeting being the confirmation or rejection of the resolutions passed at the first meeting. For this reason, and also because the whole matter was thoroughly discussed at the first meeting, I need not again enlarge upon the advantages which the shareholders will, in our opinion, derive from the proposed scheme, as compared with any other form of liquidation. It is supported by those most largely interested in the company, and, I have good reasons for believing, by the general body of members. We could not, of course, expect that out of so large a number of shareholders every one would share our views, and there were some gentlemen at the last meeting who expressed their disapproval of the scheme, as of course they were perfectly entitled to do. I am sorry that the proposal appeared to them an unjust one, but having said so, I can, after the explanations I have given, say no more. Exception was also taken by some gentlemen to my having stated that, if necessary, I should use the proxies which had been entrusted to me, and it was added that if the shareholders were again asked their opinion the number of proxies sent in would be very much reduced. My reply is that on such an important matter it was our bounden duty to give absent shareholders the means of expressing their approval of a scheme which was fully explained to them, and upon which they were, therefore, quite competent to give an opinion; and that they do approve of the resolutions is shown by the fact that a much larger number of proxies than before have been sent in for the confirmation of the resolutions. We hold over 3300 proxies from more than 600 shareholders. In conclusion, the Chairman moved the confirmation of the first resolution, as follows:—"That the Rhodes Reef Gold Mining Company (Limited) be wound up voluntarily."——Mr. PATRICK CARNEGY seconded the motion, which was carried.

The CHAIRMAN moved that the second resolution be confirmed appointing Mr. Francis Joseph Bladon, of Upper Norwood, and Mr. Alfred Neville Frewer, of Great Winchester-street, the liquidators in the said winding-up, their remuneration being fixed at the sum of 225*l*."——The motion was seconded by Mr. HODDING, and carried.

The CHAIRMAN then moved that the third resolution be confirmed—"That the liquidators be and they are hereby authorised to arrange and carry out (without the necessity of any further authority) a sale and transfer of all the assets and property of this company, including all investments and cash belonging to this company to the Devala Moyar Gold Mining Company (Limited) on terms providing for all the costs and expenses of the liquidation of this company, and for the discharge of all the liabilities of this company, and for the immediate payment to the shareholders of this company of a sum of 3*s*. 4½*d*. in respect of each share by way of final return of the surplus assets of the company in the liquidation, and that the detail of the said sale and the agreements and arrangements incident thereto, for the purpose of securing the terms aforesaid, be in the absolute discretion of the liquidators."——Mr. PATRICK CARNEGY seconded the motion.

Mr. PEEL said he did not rise for the purpose of opposing the motion which the directors had arrived at after great deliberation, and no doubt in the interests of the company, but there were one or two points on which he certainly should like some little information. He had but a small interest in this company, but he was largely interested in the parent company. It seemed to him that the Rhodes Reef Company had sufficient cash to pay the shareholders 3*s*. 4½*d*. per share, and there was, as far as he could see, no necessity whatever for the money to be handed over to the Devala Moyar, nor did he see why the land, plant, and machinery should be handed over to the Devala Moyar Company apparently for nothing. He was aware that the land and machinery had been described as valueless, but surely there must be some value attached to it—something which could be turned into money for the benefit of the Rhodes Reef shareholders.

Mr. SHORT asked whether the Rhodes Reef Company had received or were entitled to any dividend on the Consols which they held?

Mr. HODDING said the Consols were bought in November last, and there had been one dividend paid, and they would again be ex div. on July 5 next.

A SHAREHOLDER said he thought it was no use discussing the matter as the directors had sufficient proxies to carry the resolutions. Better confirm the resolutions and have done with the whole matter.

Mr. SHEARWOOD said that at the last meeting he protested against the secretary being appointed liquidator, and he repeated that protest now.

Mr. PEEL said he had received no reply to his question as to why this company should make over to the Rhodes Reef Company valuable land and plant for no consideration whatever. He could not understand it.

A SHAREHOLDER said it was a thing which no "fellah" could understand.

Sir LEOPOLD HEATH (a director) said the matter was fully discussed and explained at the last meeting. Mr. Peel seemed to think that the Rhodes Reef Company was giving away something valuable; as a matter of fact it was giving away nothing valuable except for speculation, and the Devala-Moyar Company did not want to enter into speculation.

A SHAREHOLDER: The land never was worth anything. It is worth 2 rs. per acre. Ever since the time when Sir David Salomons and Mr. Brough Smyth were connected with it it has been a myth and a will-o'-the wisp.

The third resolution was then put and carried.

A SHAREHOLDER proposed a vote of thanks to Mr. Bladon for having volunteered to wind up the company.

Mr. BLADON said that when he had carried out the duties of the liquidation he should be happy to receive the thanks of the shareholders, but on the present occasion he thought they ought to pass a vote of thanks to the directors, who had, he believed, done the best they could for the company in the unfortunate circumstances in which it was placed.

Mr. SUTTON said he should move as an amendment that no thanks were due to the directors for the way in which they had mismanaged the company.

A short and somewhat noisy discussion followed, and in the end the resolution was not put, and the meeting broke up.

GLENROCK COMPANY.

The first ordinary general meeting of shareholders was held at the Cannon-street Hotel on Thursday,—Col. HOWARD in the chair.

Mr. JENNINGS read the notice calling the meeting.

The CHAIRMAN said that nearly four months having elapsed since the formation of the company this meeting was called in compliance with the Companies' Act though no business could be done or resolutions passed until the next meeting. The board were happy to meet the shareholders, and offer them all the information in their possession since the last meeting of the Indian Glenrock Gold Mining Company, now in course of liquidation. It must be remembered that this was the first meeting of a new company, in which important new industries had been commenced, concerning which there had not yet been time to obtain further definite information from India than that that branch of the company's business had been started. The liquidators of the Indian Glenrock Gold Mining Company had completed their work, and the formal transfer by deed from the old company to the new company was in hand, and would be completed in India as soon as possible. Having referred to the action taken by one of the largest shareholders who had declined to join the new company, which action had been defeated, the Chairman went on to say that, acting in accordance with the resolutions passed at the formal meeting of the Indian Glenrock Company, the present company was formed. The Articles had been drawn up with reference to the business which must arise out of the objects for which the company had been formed—powers to mine as formerly—and, in addition, to cultivate the land, to prepare the produce for market, to manufacture fibre, both on the company's account and others, to act as agents, and to do whatever may be necessary for the carrying out of these objects. The cash in hand on Feb. 12 last, when the late company went into liquidation, was 28,147*l*.; at the present time it was 30,000*l*. The principal items of expenditure had been the cost of fibre machines on this site, and the coffee expenditure on the other, including the preparation and collection of the last crop (about 50 tons) which had arrived in London and been partly sold. There had been a great fall in the value of coffee, so that the estimate made in January last of 70*l*. per ton had not been realised. The portion sold only averaged about 57*l*. per ton, but a better average was hoped for the balance. The only mining work now going on was the sinking of a deep shaft at Bittusal—the sole remaining hopeful point. The depth obtained there was about 160 ft., but in a rock of adamantine hardness, which immensely increased the cost of work and diminished the prospects of a hopeful result. A crosscut would be put out to the reef, which would be reached in about a month or six weeks. The mining staff was being dismissed as quickly as arrangements could be made with them; only those whose usefulness to the cultivation of the manufacture of fibre justified their retention being kept. Though the mining expenses would be kept down, and would be kept down to the lowest possible point, all rights were maintained, and at any time mining work might be resumed if more favourable conditions or prospects should arise. Mr. Minchin spoke hopefully of the cultivation of the fibre, and alluded to the extraordinary rapidity with which the rhea plant was being propagated. Mr. Minchin was also giving his attention to indigenous fibre plants, from which he expected some valuable results, especially from the wild rhea, which grew spontaneously whenever the forest was opened out. Fibre from this had been sent to London, and pronounced scarcely different from the true rhea. He went on to refer to the important acquisition which the board had been able to make in obtaining from the Indian Government the exclusive concession for fibre growing in the whole of the Bhowani Valley. The concession was for ten years. Numerous applications had since been made to Government for other similar concessions, but all had been refused. If there was anything in the fibre business it was quite certain that this company would not only be able to earn the earliest return, but also to enjoy the fruits with great advantage for some years to come.

A SHAREHOLDER asked the cost of treating the fibre?——The SECRETARY said from 10*l*. to 12*l*. per ton, but the cost could not be accurately calculated at present.

The CHAIRMAN, in reply to a question, said that the entire cost of the fibre growing and preparation in Glenrock, as well as the other cultivation, would not exceed 5000*l*. for the next 10 months.

Mr. BLADON asked what quantity of marketable fibre would the machines yield?——The CHAIRMAN said the 12 machines would yield about 1 ton of fibre per day, but this would vary in proportion to the percentage of fibre in the green stuff.

A SHAREHOLDER said he understood that experiments were still being made in gold mining.——The CHAIRMAN said that there were two places in the Wynaad which appeared to show symptoms of distinct gold reefs, one at the Phœnix Consolidated and the other at Bittusal, on this company's property. They were going down at Bittusal to see if the reef held there. The rock was of adamantine hardness. The manager proposed to go down 6 ft., and then drive a cross-cut to the place where the reef ought to be; and many of the most expert miners considered that ought to decide whether there was paying reef or not without further expenditure.

Mr. WILLIAM ABBOTT expressed his hope that the directors would not, whilst developing the agricultural capabilities of the property, forget that the money was subscribed originally for the prosecution of gold mining industry, and that there were many shareholders who would like to see explorations carried on with the view of more thoroughly ascertaining whether or not gold existed in paying quantities on the company's property. He considered that a great responsibility rested upon the English and Indian Governments in connection with the formation of these Indian gold mining companies. Those who subscribed their money did so on the faith of the elaborate document issued under the authority of the Indian Government, and endorsed by the English Government, upon the report of Mr. Brough Smyth, where he stated that such and such results were to be obtained from gold mining in the district. He suggested whether this company and other similar companies could not join together in making representations to the Government on the subject, with the view of seeing whether some compensation or reparation should be made.

The CHAIRMAN said that if other companies liked to appoint delegates this company would also appoint one, but he could not see that much was to be done in that direction. He might mention that all the expenditure was being cut down to the lowest possible point.

A vote of thanks to the Chairman and directors closed the proceedings.

ENGLISH AND AUSTRALIAN COPPER COMPANY.

An extraordinary general meeting of shareholders was held at the Cannon-street Hotel, on Thursday (Mr. COBBETT in the chair), for the purpose of electing a director in the place of Mr. Spencer Herapath, deceased.

The SECRETARY having read the notice convening the meeting, the CHAIRMAN said the only business the shareholders had to do was to elect a director to fill the vacancy caused by the death of their respected friend, Mr. Spencer Herapath. He need not say that the board had felt very much indeed the great loss they had sustained by the death of Mr. Herapath, who had been connected with the company for 25 years, and whose services were always devoted to promoting the interests of the shareholders.

Mr. COLEMAN proposed Mr. Nathaniel Harris, of Bloomsbury, which was seconded by Mr. BAKER.

Mr. RUSSELL proposed Mr. F. W. Freese, of Broad-street, which was seconded by Mr. MORGAN.

Upon a show of hands being taken, it was in favour of Mr. Harris. Thereupon a requisition for a poll was put in; but no votes were recorded in favour of Mr. Harris. Five shareholders having voted for Mr. Freese, the CHAIRMAN declared he had been duly elected to fill the vacancy caused by the death of Mr. Spencer Herapath.

The business concluded with a vote of thanks to the Chairman.

NUNDYDROOG GOLD MINING COMPANY.

The ordinary general meeting of shareholders was held at the offices of the company, Queen-street-place, yesterday,

Capt. W. B. MCTAGGART in the chair.

Mr. W. G. WILLIAMS (the secretary) read the notice convening the meeting, and the directors' report and statement of accounts were submitted.

The directors reported:—As the operations at the mines since the time of the last general meeting have been almost entirely confined to doing what was necessary for retaining possession of the property, and keeping the machinery and plant in good order, there is but little for the directors to report on the present occasion.

It is necessary, however, in order to comply with the Articles of Association, that this meeting should be held, and that accounts should be presented. The directors, therefore, submit the balance-sheet made up to Dec. 31 (with auditor's report thereon), which shows that the expenditure during that year, including 60*l*. 13*s*. 10*d*. disbursed under the head of machinery, and 228*l*. 18*s*. 6*d*. charged for interest on debenture loan amounted to the sum of 228*l*. 4*s*. 8*d*.; deducting from this amount received from gold sold 133*l*. 12*s*. 11*d*.; amount received for interest, exchanges, &c., 65*l*. 2*s*. 10*d*. = 198*l*. 15*s*. 9*d*. so that the net outlay for 1883 was 208*l*. 8*s*. 11*d*.

It will be remembered that in the report to the general meeting in June last year it was stated that the expenditure from the end of 1882 up to that time had been about 1900*l*. The subsequent outlay, has, therefore, been but trifling. The amount received to Dec. 31 on account of the 3000*l*. of debentures which was subscribed for was 2521*l*. 13*s*. 4*d*. It has not been necessary yet to call up the whole amount, and a part of the expenses has been met by receipts for stores and materials disposed of in India. A reliable care-taker has been in charge of the property, and with a few coolies has done what was requisite to protect the company's interests, and to preserve the machinery.

It will no doubt be satisfactory to the shareholders under the present circumstances of the company, to know that the works at the neighbouring mines of the Mysore Gold Mining Company, which are now under the direction of Capt. Plummer (formerly this company's mining superintendent), are being vigorously prosecuted by him, and that the operations have recently been attended with most encouraging results. The directors, are, therefore, hopeful that, once the success of those mines is established, it may be possible to raise the capital necessary to resume the prosecution of the mines belonging to this company, the indications of which were, according to Capt. Plummer when he had to leave them, superior to many others in the field. In the meantime the company's expenses are but very small, and such as its available resources can provide for during some time to come.

The election of Mr. Robert Taylor to a seat at the board in the place of Mr. Richard Taylor, deceased, was confirmed. Mr. Fergusson and Capt. McTaggart, who retired by rotation were re-elected directors, and Mr. W. Wainwright, jun., was reappointed auditor.

The proceedings terminated with the usual complimentary vote of thanks.

BELL'S ASBESTOS.

On Wednesday afternoon Mr. Todd, the local representative of Mr. Bell's Asbestos Works, entertained a number of ladies and gentlemen at a *dejeuner*, which was tastefully laid out in the large room at the Account House on Collacombe Mine, about 3 miles from Tavistock. The room was decorated with a profusion of choice flowers, and at one end was a careful arrangement of evergreens, flowers, and wild strawberries, the words "Welcome to All" being worked in daisies on a ground of ivy leaves. Miss Skewis, Miss Hitchins, and Mr. Todd were the embellishers, and well they executed their task. The chair was occupied by Mr. TODD, who after dinner proposed the usual loyal and patriotic toasts, which were heartily received.

The CHAIRMAN explained that the reason for his inviting them there that day to meet him was to thank "One and All" for the very great kindness which he had received since he had been in the neighbourhood, and for the orders for work which he had received from several mines in the locality, and he was gratified to hear from every direction that the asbestos clothing which he had put on the boilers, pipes, and cylinders that he had done had given every satisfaction; and still more pleased at the testimony borne by those who had tried the asbestos that he had not at all exaggerated the saving which its use would effect. He was about to leave the neighbourhood, unfortunately, but there was still a good deal of work to be done, and he felt confident that much more would be done in the district, because every week fresh orders were being received, and now he found that he had not to work so arduously as he did at first to get orders, because what he had done at numerous mines was getting known, and people were beginning to find what a great benefit they could derive from the use of asbestos. Unfortunately, mining operation at the present time was not in a flourishing state; but perhaps he could not have introduced asbestos at a more opportune period, because he was in a position to offer them an article whose use would enable them very materially to reduce their expenditure for fuel. Mine proprietors and others talked about being poor; but for a very small outlay he could supply them with something that would enable them to economise. The first gentleman who had used asbestos in that neighbourhood was Mr. W. J. Chalk, who was there that day, and would, no doubt, tell them the result of its use at Kit Hill. Mr. Chalk was a gentleman of great experience, a practical engineer, and he thoroughly understood the nature of asbestos. Some months after supplying Mr. Chalk with asbestos, he went to him and asked him if it came up to his expectations, and he was glad to be able to say that Mr. Chalk declared that he never could have believed that the use of asbestos would have saved him the amount of fuel, time, and labour that the covering of his pipes, &c., did at Kit Hill. He (the speaker) had also done some work at Bedford United Mine for Capt. Trezise, and he was equally well pleased with the results. He had supplied some 3000 ft. at Okel Tor, and at Collacombe he had covered the whole of their machinery. Capt. Skewis was very pleased at the results. Mr. Todd again thanked the company for their kindness, and drank to their very good health.

Mr. W. J. CHALK, manager of Kit Hill Granite Works, said, as his name had been mentioned somewhat prominently by their good friend and host that day—Mr. Todd—if he would not be taking a congenial task out of anybody else's hands, he should like the honour of proposing Mr. Todd's health. With regard to what Mr. Todd had told them, he had, in connection with the works at Kit Hill, to go to London some time ago and purchase an over-head steam traveller—an engine which moved in mid air, being suspended from the ground. At Kit Hill the boiler was exposed to all kinds of weather. Those who were practical men would know what serious difficulties one had to keep sufficient heat in a boiler under such circumstances. He found it to be a very great difficulty; and, as engineers had to do, he set to work to get out of the difficulty. He asked the men what they thought about it—for he was never above taking advice from others, however humble their position might be. The men thought the best thing that could be done was to make a box round the boiler and fill it with sand; but he found that by doing that they would be adding a very great weight to what was already a heavy engine, and so impairing the work that it could do. The engine was able to lift 10 tons; but if the suggestion he had just mentioned were adopted the engine would only be able to lift 9 tons. Ever since he had commenced scientific study—now 15 years ago—he had heard of asbestos. It was originally used by conjurors and others to show what wonderful things they could do with regard to handling fire-balls, and so on; then it was used in connection with science by chemical experimentalists; and now, mainly through the enterprise of Mr. Bell, asbestos was introduced into this country in such a form that it could be used for commercial purposes. He wrote to Mr. Bell, upon seeing his advertisement; and, after some correspondence, it was arranged that he (Mr. Chalk) should try Mr. Bell's ordinary asbestos covering. Mr. Bell said his representative would arrive at Gunnislake at a particular date. He saw Mr. Todd, and told him the difficulty he was in. Mr. Todd examined the engine, and, as a result, it was coated with asbestos covering. Mr. Todd told him that, as asbestos was put on with water, water might take it off, as the engine was so exposed to the weather. They, therefore, gave the asbestos several coats of paint, and over it put a mixture of coal tar and naphtha; it had grown into a glossy surface, and was perfectly impervious to the weather, and the result had been marvellous. Those who were managers of works knew how men distrusted anything that was new, simply because it was new. At first the men did not believe in the asbestos, and wanted to go back to the use of the sand-box; now they were all in favour of asbestos, and there was not a dissentient voice in the place. He was satisfied that the use of asbestos had resulted in a saving of more than half the quantity of coal that was previously used. It used to take between two and three hours to get up steam; they could now get it up in an hour. Taking all things into consideration, and allowing for the fact that they did not work the engine every day, they saved at Kit Hill 2*l*. 10*s*. a month as the result of using asbestos. All of them who knew Mr. Todd knew what a master he was of the art of pushing business. He must congratulate Mr. Todd on being connected with such an article as asbestos, because it could not disappoint any one. It produced most marvellous results. In the present day prices were cut so fine that the only chance one had of keeping his balance-sheet right was to practice every economy, and this could be done by the use of Mr. Bell's asbestos. He would venture to point a moral, and say that practical engineers and practical men of every kind should not turn their backs on any invention. By all means let them move with care, but he thought he saw in the great improvements and inventions that were going on a chance of maintaining our country in that proud position she had occupied in the past, and would occupy in the future. He acknowledged Mr. Bell as a great helper in promoting the growth and glorious work of maintaining and increasing our country's commercial honour, and he asked them to drink Mr. Todd's health with musical honours.

The CHAIRMAN having appropriately returned thanks,

Mr. J. PEARCE "The Health of Mr. and Mrs. John Todd, and Success to the Asbestos Works." He said they were indeed indebted to Mr. Bell for introducing to the district what would enable them to effect a saving of 25 per cent. in the working of their machinery, and he invited the company to show their appreciation of Mr. Bell's enterprising spirit by drinking the toast with musical honours.—This was cordially done.

Mr. FLECK, in responding, said he had the pleasure of knowing Mr. John Bell, and expressed regret that that gentlemen was not with them, for one of the kindest and best employers of labour was Mr. John Bell, who he was sure would be gratified to hear from Mr. Todd that they had so honoured him as not only to drink his health, but that also of Mr. Todd.

Capt. SKEWIS, in submitting the health of Dr. Kempthorne, said that gentleman was well known in that part of the country for his liberal actions, his medical skill, as a large shareholder in the mines of the district, and as one who took a deep interest in the progress and development of the country.

Dr. KEMPTHORNE, in the course of a long and able speech, expressed his pleasure in availing himself of the opportunity which Mr. Bell had afforded them, through his very intelligent and active agent Mr. Todd, of expressing their opinions with regard to the asbestos. He was certain that its use must be attended with success. He had felt an interest in it for many years, and had wondered why it had not been used to cover machinery before. He was glad that they had an intelligent agent on that mine, who had availed himself of its use. He had inspected the asbestos covering on the mine that day. It was the first time that he had seen anything of the kind, and he could not help saying that he was filled with admiration at what he had witnessed. To economise fuel in connection with their mines was a matter of very great importance in Devon and Cornwall. If by the use of asbestos they saved 25 per cent. of their coal, let them further consider what they saved in the carriage of coal. He hoped when Mr. Todd went back he would be able to report the sincerity of their belief in the prospect before them of being able, by the use of the asbestos, to carry on their mines with much greater economy. They were much obliged to Mr. Bell and to all great men who availed themselves of the advantages science offered, as Mr. Bell had done. He was surprised that the asbestos covering could be applied so admirably and so cheaply. He looked upon the process as a work of art. Throughout the whole length of the pipes that he had examined that day not a single flaw was to be seen. The substance was spongy, and was undoubtedly a good non-conductor; had it been hard it would not have answered so well. He was much pleased to hear Mr. Chalk's remarks. Mr. Chalk had spoken to the purpose, with energy and zeal, and he thought Mr. Chalk had done Mr. Todd good service. He was convinced that the time would come when every mine throughout Devon and Cornwall would use the asbestos, because mines could not afford to go on making an unnecessary expenditure of more than 25 per cent.

Mr. SAMUEL HITCHENS said he had tried the asbestos, and he could safely say that its use affected a saving of 25 per cent. in fuel, while steam could be got up in three-quarters of an hour instead of two hours.

Dr. BROWN, of London, in responding to the toast of his health, proposed by Dr. Kempthorne, said as a Cornishman, he felt a great interest in the mining of that part of the country, and he felt it his duty to spend his money in promoting the industries of his native county. Towards the close of an eloquent speech on the commercial prospects of the country, Dr. Brown said asbestos was calculated to result in a great saving to their pockets. It would not do everything for mining, but it would do a great deal. He had been much struck with the advantages which the clothing offered, and he strongly recommended its use on all the mines throughout Devon and Cornwall.

Capt. SKEWIS, in replying to the toast of his health, which was proposed by Mr. J. Pearce, said for more than 30 years he had been acquainted with all the artificial substances which had been introduced into Devon and Cornwall for the purpose of clothing steam pipes, cylinders, and other machinery connected with steam engines. Many of them had been valuable, many of them had been such as mine proprietors had derived advantages from, but certain defects had rendered them imperfect, and had resulted in a certain amount of disappointment. Now, he found that the asbestos did not crack, it did not break, it held together, and it was very natural to conclude that such would be the case from such soft, fibrous substance. It held together, and formed a uniform pasty over the pipes and cylinders in such a manner as to render it a perfect non-conductor of heat, and therefore he saw from the first that it was superior to anything that he had seen in that way before. Therefore he decided to have the cylinders and pipes on that mine clothed with asbestos. It was a much better and more effectual method of clothing machinery than the old one. The labour of fixing the sand boxes round the pipes in the most careful way was but imperfect, and there was great difficulty in dealing with the pipes and boilers when repairs were necessary. Moreover, earthy substances had a very damaging effect on the iron of the boilers and pipes. With regard to asbestos, it had only to be mixed and placed on the boilers and pipes, and it could be placed round nozzles of engines. Every portion of machinery might be most effectually closed in by asbestos, which was a great consideration in mining matters. He had made very careful calculations, and he was certain that the use of the asbestos would result in a saving of 25 per cent. He knew that when anything new was introduced into a district there was a very strong tendency to wait before purchasing it, and see it tried by a neighbour first. He had no doubt that many inventions which would have proved a great benefit to mining in Devon and Cornwall had been lost in that way, and therefore he decided, as soon as he was satisfied with asbestos, to try it at the mine. Hitherto it had been impossible to effectually cover pipes and nozzles. He prophesied that Mr. Todd had a successful future before him. He would not long have to ask any person to use asbestos, but he would receive applications for it by post so numerous as to be perfectly surprising. Cornish people acted to a great extent on the principle of their motto, "One and All," and "if they would they would, and if they wouldn't they wouldn't." Therefore, when anything new was introduced before it was properly tried, they said, "we won't;" but when it had been proved they said, "It is good, and we will support it.

The other toasts were "Agriculture," proposed by Capt. SKEWIS and responded to by Mr. W. SQUIRE; "The Ladies," ably acknowledged by Miss SKEWIS; the health of Messrs. Pearce and that of Capt. and Mrs. Hitchens and family.

EBBW VALE STEEL, IRON, AND COAL.—At the general meeting of shareholders held at Manchester, on Wednesday (Mr. Edward Coward, Chairman, presiding) the report showed a gross profit for the year ended March 31 of 27,331*l*. 1*s*. 3*d*., making, with the amount brought forward from last year (23,439*l*. 17*s*. 3*d*.), a total of 50,770*l*. 18*s* 6*d*. The previous year's working showed a gross profit 34,476*l*. 7*s*. 10*d*., which enabled the directors to pay a dividend of 5*s*. per share (20*l*. paid up) and carry forward 23,439*l*. 17*s*. There is no dividend this year.—The Chairman, in moving the adoption of the report, said the first clause of it fully indicated the feeling with which the directors met the shareholders that day. During the year ended March 31 the company had raised more coal, putting aside the pit at Abercarn, than they had ever raised before. Some of it had been sold at satisfactory prices; some very much otherwise. They had rolled a much larger number of steel rails than they had rolled before—116,000 tons, against

113,000 tons the year before, and 90,000 tons the year ending March 31, 1882. But the prices were unremunerative, and the company had also been obliged to work short time during a portion of the year, the fact being that the productive power of steel rails was greater than the consumptive power, and prices had been forced down so low at the end of last year that the steelmakers of England and Scotland, with one exception, and most of the makers in Belgium, Germany, and Austria, agreed to decrease the production *pro rata* according to what they had before rolled, with the result that during the last few months they had got an improved price for the manufactured article. At the last annual meeting he told them that they had disposed of the pit at Abercarn, where after the unfortunate explosion they had been making a loss of 4800*l.* per annum, and he had anticipated that they would receive a profit from the royalties received from the leases of about 10 0*l.* The result of the year was that they got a little over 2000*l.*, and they trusted they would now get a very substantial sum from that colliery. They had ceased raising ore at Brendon Hills, and brought away all they had then in stock. The mortgage account continued to show satisfactory progress. In 1878 the company had a liability upon mortgage debentures and short loans of 679,000*l.*; their present liability was 583,000*l.* In 1878 the cash in the hands of the trustees amounted to 20,000*l.*; on March 31 last it was 74,000*l.* Turning to the balance-sheet, he stated that they still had the rail guarantee fund at 3000*l.* During the year they had only had one claim, and that for a single rail. This was very satisfactory as showing the quality of the manufactures. Messrs. Richardson and Shelmerdine were re-elected directors, and Messrs. Cooke Brothers were reappointed auditors.—The Chairman, responding to a vote of thanks, said they had a good concern and good management, and the company would go on endeavouring to produce as cheaply as possible, and selling as well as possible. If trade only gave them a chance he had no fear of the future.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

ANDERTON'S HOTEL (Limited).—Capital 60,000*l.*, in shares of 5*l.* To acquire, maintain, and carry on an established hotel in the City of London. The subscribers are—A. J. Altmar, Little Britain, 50; W. B. Roberts, South Sydenham, 50; A. Barfield, 26, Clarges-street, 200; B. T. Morton, Chiswick, 10; M. Dyett, 17, Philpot-lane, 10; H. J. Pratt, 10, Old Jewry Chambers, 10; R. H. Clemow, 7, Loraine-place, 20.

THE OLDHAM AND DISTRICT INSURANCE COMPANY (Limited).—Capital 200,000*l.*, in shares of 1*l.* The general business of a fire insurance company. The subscribers (who take 100 shares each) are—E. Hall, Oldham; J. Potter, Oldham; J. Prestwick, Oldham; W. Jackson, Croydon; C. Clark, Great St. Helen's; J. D. Peddie, Edinburgh; C. Graham-Rosenbush, 27, Leadenhall-street; C. J. Seddon, Liverpool; A. Martin, 27, Leadenhall-street; A. Morgan, 9, Cullum-street.

THE NEWLANDS VALE SILVER-LEAD MINING COMPANY (Limited).—Capital 6000*l.*, in shares of 1*l.* To acquire by purchase or otherwise any lands, hereditaments, works, mines, minerals, or any other property; rights and privileges over same, and more particularly to adopt and carry out an agreement made between E. C. Bradley of the one part, and R. W. Munrow, as trustee for the company, of the other. To sell, lease, or otherwise dispose of the whole or any part of the business, property, or undertaking of the company. The subscribers (who take one share each) are—W. Bright, Liverpool, gentleman; J. M. Gibbs, Liverpool, printer; E. J. Hale, Liverpool, assistant secretary; G. H. Greaves, Claughton, major; D. Washington, Birkenhead, contractor; H. Donnell, Liverpool, contractor; G. H. Brabier, Liverpool, accountant. No Articles of Association have been registered.

WEBB, SHAKSPEARE, AND WILLIAMS (Limited).—Capital 50,000*l.*, in shares of 100*l.* The manufacture and sale of tin and terne-plates, sheets and bar iron, or any other goods, articles, or materials. The subscribers (who take one share each) are—W. Webb, Beckenham; F. H. Shakspeare, Streatham; H. Webb, Hove; J. Shakspeare, West Cross; R. H. Sampson, Pontardulais; E. S. Williams, Swansea; C. G. Hale, 26, Austin Friars.

THE CHEMICAL PAPERS COMPANY (Limited).—Capital 28,000*l.*, in shares of 10*l.* To acquire and carry on an established business situated at Colombes-Embranchement, in France. The subscribers (who take one share each) are—B. J. Miles, Paris; C. Little, Paris; A. Henry, Paris; J. A. Duvier, Paris; H. S. Roberts, 35, Aldridge-road Villas; J. O. Chalifoux, Paris; C. Blundell, Paris.

THE COPYING APPARATUS COMPANY (Limited).—Capital 10,000*l.*, in shares of 10*l.* To purchase and carry on a business at 36, Farringdon-street, with which are connected certain patent rights. The subscribers (who take one share each) are—E. E. Johnson, 110, Cannon-street; G. W. Andrews, Kentish Town; F. J. Lovesay, 17, Elmington-road; W. B. Jones, 28, Salisbury-road; T. P. Wiscombe, South Hackney; M. Farmer, Chelsea; F. T. G. Archer, 310, Southwark Park-road.

DAY AND COLLINS (Limited).—Capital 20,000*l.*, in shares of 10*l.* To acquire the Atlas Works, situated in Fann-street, City, and to continue the manufacture and sale of patent machine-cut wood type and other descriptions of wood letters, &c. The subscribers are—J. Haddon, 3, Bouverie-street, 20; J. F. Wilkinson, Manchester, 52: W. Marsden, Leighton-road, 40; G. G. Fitzgerald, Commercial-road, 10; B. Bench, Southgate, 25; F. W. Ventries, Peckham, 5; R. J. Day, 29, Fann-street, 1.

JOHN FRIMSTON AND SONS (Limited).—Capital 10,000*l.*, in shares of 5*l.* To acquire, and carry on, a business of wholesale hardware merchants and general factors, &c., established in Manchester. The subscribers (who take one share each) are—F. E. Estcourt, Manchester; J. Fairclough, Castleton; J. G. Shepherd, Manchester; J. W. Hunter, Old Trafford; W. H. Mason, Manchester; J. Crompton, Marple; J. T. Gregory, Manchester.

THE LIVERPOOL CENTRAL PROPERTY COMPANY (Limited).—Capital 50,000*l.*, in shares of 10*l.* Acquiring certain property and carrying on the usual business of a land company and building society. The subscribers (who take one share each) are—E. Kirley, Birkenhead; A. Thornton, Liverpool; H. Burrowes, Walton; R. Brown, Salop; G. Guerson, Liverpool; C. J. Legge, Liverpool; G. G. Walmsby, Liverpool.

THE DARLINGTON WAGON AND ENGINEERING COMPANY (Limited).—Capital 50,000*l.*, in shares of 10*l.* The purchase of the land, buildings, machinery, plant, &c., belonging to the Darlington Wagon Company and Wilson Brothers and Company, for the purpose of continuing the businesses connected therewith. The subscribers (who take one share each) are—J. Bowman, Darlington; J. Wilson, Darlington; J. Angus, Newcastle-on-Tyne; T. Fry, Darlington; G. D. Wilson, Darlington; J. Williamson, Darlington; W. M. Angus, Darlington; G. W. Bartlett, jun., Darlington; H. W. Nider, Darlington.

THE EXMOUTH BRICK AND TILE COMPANY (Limited).—Capital 25,000*l.*, in shares of 5*l.* The business of a brick and tile makers, manufacturers of terra-cotta ware, drain-pipes, and other earthenware, &c. The subscribers are—C. Warren, Exmouth, 600; E. Locke, Worcester, 10; J. Walter, Moretonhampstead. 20; W. S. Blake, Ottery St. Mary, 20; T. Carder, Paignton, 10; S. W. Tupman, Exmouth, 10; W. Chudley, Exeter, 10.

THE NEATH ABBEY AND DYFFRYN ESTATES COLLIERY COMPANY (Limited).—Capital 120,000*l.*, in shares of 10*l.* To acquire by purchase or otherwise any colliery, colliery rights, lands, mines, mining rights, works, and properties in Glamorganshire for the purpose of carrying on in Wales or England the business of colliery owners, coal merchants, miners, &c. The subscribers (who take one share each) are—H. Hopkinson, 78, Holland Park, Lieutenant-General; R. Monckton, Sevenoaks, Esq.; J. W. M. Dagnall, 90, Cannon-street, C.E.; A. W. Wall, Brentford, C.E.; J. T. Brice, 44, Roderick-road, gentleman; R. C. Kirkman, Wallington, accountant; J. S. Lawrence, 37, Walbrook, C.E.

THE JOYCE GREEN ESTATE COMPANY (Limited).—Capital 16,000*l.*, in shares of 100*l.* To acquire a certain property covering about 265 acres, and situated at Dartford, Kent, and to carry on the general business of a land, building, and brick-making company. The subscribers (who take one share each) are—G. A. Hubbard, Bexley Heath; W. H. Hubbard, Hampton; J. T. Prall, Rochester; R. Ball, Rochester; G. W. Prall, Rochester; J. H. Prall, Rochester; A. Kenneth, Rochester.

THE CORSICAN COPPER AND CHEMICAL COMPANY (Limited).—Capital 25,000*l.*, in shares of 2*l.* To obtain a grant of certain property and works situated in Corsica, for the purpose of carrying on all business connected with a chemical, &c., company. The subscribers (who take one share each) are—G. Anderson, 35A, Great George-street; T. Bush, Farningham; C. Cadogan, 3, West-street; J. Cunnyngham, Bastia; W. Robinson, 21, West Arbour-street; A. Bright, Brighton; L. Beythers, 3, West-street.

THE QUEENSLAND COLLIERIES COMPANY (Limited).—Capital 12,000*l.*, in shares of 1*l.* To purchase or otherwise acquire, and hold lands, estates, collieries, mines, stone and lime quarries, &c., in Australia or elsewhere, and to carry on the business of landowners, colliery proprietors, coaldealers, ironmasters, quarrymen, &c. The subscribers (who take one share each) are—C. Probyn, 23, Thurlow-grove; W. Whitley, Howard; C. Quentin, 46, Queen Victoria-street; C. Quentin, 46, Queen Victoria-street; C. S. C. Watkins, Carshalton; P. Tarbutt, 46, Queen Victoria-street; J. H. Guernsey, St. Michael's House; A. Fell, 46, Queen Victoria-street.

THE HULL FORGE COMPANY (Limited).—Capital 30,000*l.*, in shares of 10*l.* To purchase certain freehold works at Kingston-upon-Hull, together with the machinery, plant, &c., and to carry on the business connected therewith. The subscribers (who take one share each) are—T. Cooper, Rotherham; F. Clewes, Rotherham; W. Wigfield, Rotherham; G. Whitehead, Hull; E. E. Wright, 37, Walbrook J. Shaw, Sheffield; G. H. Hawkesley, Sheffield.

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth (June 26), write:—In consequence of the improvement in the western part of the Dolcoath Mine there has been a good demand for shares, and they close at an advance of 3½ on last week's prices. Should the lode be cut rich at the 314 there will be another spurt in prices. East Pools steady at 41¼; returns continue satisfactory. Progressive mines are neglected, and shares can be obtained very cheap. Closing quotations herewith:—Camborne Vean, ⅛ to ¼; Carn Brea, 1⅞ to 1⅞; Cook's Kitchen, 12 to 12⅛; Dolcoath, 75⅛ to 75¾; East Pool, 41 to 41⅛; Killifreth, ⅛ to ⅜; New Cook's Kitchen, ¾ to 1; New Kitty, 1 to 1⅛; Polberro, 1¼ to 1⅜; South Condurrow, 9 to 9⅛; South Kitty, ⅛ to ¾; South Crofty, 3 to 4; South Wheal Frances, 8 to 8⅛; Tincroft, 3 to 3⅛; West Basset, 3¼ to 3¼; West Kitty, 11⅛ to 11¾; West Frances, 5 to 5⅛; West Seton, 4⅛ to 5; Wheal Agar, 16¼ to 16¾; Wheal Basset, 3 to 3⅛; Wheal Grenville, 6 to 6⅛; Wheal Kitty (St. Agnes), ⅛ to ⅜; Wheal Peevor, ¾ to 1.

— Mr. S. J. DAVEY, mine sharedealer, Redruth (June 26), writes:—Dolcoaths this week advanced 5. but there has been but very little business doing in other mines in our market. To-day Dolcoaths sold at from 76¾ for time on, to 75⅛ cash. Subjoined are the closing quotations:—Carn Brea, 1⅝ to 2; Cook's Kitchen, 12 to 14; Dolcoath, 75 to 76; East Pool, 41 to 42; Killifreth, 10s. to 15s.; New Cook's Kitchen, ¾ to 1; New Kitty, 1 to 1⅛; South Condurrow, 9 to 9⅛; South Crofty, 3 to 3⅛; South Frances, 8 to 8¼; Tincroft, 3 to 3¼; Trevaunance, 1⅞ to 2⅛; West Basset, 3¼ to 4; West Frances, 5 to 5⅛; West Kitty, 11⅛ to 11¾; West Polbreen, ⅞ to 1⅛; West Seton, 4⅛ to 5; Wheal Agar, 15¾ to 16⅜; Wheal Basset, 3 to 3⅛; Wheal Grenville, 6 to 6⅛; Wheal Peevor, ¾ to 1¼; Wheal Kitty, ½ to ⅝; Wheal Uny, ⅛ to ⅜; Wheal Coates, ⅛ to ¼.

— Mr. M. W. BAWDEN, Liskeard (June 26), writes:—The mining market continues much the same as last week, with the exception of an enquiry for Dolcoath and Tincroft shares, on an improvement at the former to the west of Harriett's shaft, and the latter to the east of Martin's shaft, and shares have advanced. At Killifreth Mine meeting held on Tuesday a call of 5s. per 6000th share was made. Subjoined are the closing quotations:—Bedford United, 1⅛ to 1¼; Carn Brea, 1¾ to 2; Cook's Kitchen, 12 to 12¼; Dolcoath, 74 to 75; Devon Consols, 2⅛ to 2¼; East Caradon, ⅛ to ¼; East Pool, 40 to 40¾; Glasgow Caradon, ⅛ to ¼; Gunnislake (Clitters), ⅛ to ⅜; Killifreth, ⅛ to ⅜, c.p.; Marke Valley, ⅛ to ¼; Old Gunnislake, ⅛ to ¼; Phœnix United, 2⅛ to 2¼; Prince of Wales, ⅛ to ¼; South Caradon (Limited), fully-paid, ⅛ to ¼; South Crofty, 4 to 4⅛; South Devon United, ⅛ to ¼; South Frances, 8 to 8¼; Tincroft, 4 to 4¼; West Basset, 3½ to 3¾; West Caradon, 2s. 6d. to 5s.; West Frances, 5 to 5¼; West Kitty, 11¼ to 11⅛; West Crebor, 2s. 6d. to 5s.; West Phœnix, ⅛ to ¼; Wheal Basset, 4 to 4¼; Wheal Crebor, 1¼ to 1⅜; Wheal Kitty, ⅝ to ¾; Wheal Peevor, ⅛ to ⅜; Wheal Uny, ⅞ to 1.

— Mr. JOHN CARTER, mine sharedealer, Camborne (June 26), writes:—The chief feature in our market is the rapid rise in Dolcoaths on the improvement in the north lode, east of Harriett's shaft, at the 295. Prices advanced to 77, closing to-day at 75½ to 76½. Other shares remain quiet. Subjoined are the closing quotations:—Carn Brea, 1¾ to 1⅞; Cook's Kitchen, 12 to 13; Dolcoath, 75⅛ to 76¼; East Pool, 41¼ to 42; Killifreth, ⅛ to ⅜; New Cook's Kitchen, ⅛ to 1; New Kitty, 1¼ to 1⅜; South Condurrow, 9¼ to 9⅛; South Crofty, 3 to 3⅛; South Frances, 8 to 8¼; Tincroft, 3 to 3¼; West Basset, 3⅛ to 4¼; West Frances, 5 to 5⅜; West Kitty, 11⅛ to 12; West Polldice, ⅜ to ½; West Seton, 4⅛ to 5; Wheal Agar, 16 to 16½; Wheal Basset, 3 to 3⅛; Wheal Grenville, 6¼ to 6½; Wheal Kitty, ½ to ⅝; Wheal Peevor, ⅛ to ¾; Wheal Uny, ⅛ to ¼.

MANCHESTER.—Messrs. JOSEPH R. and W. P. BAINES, share-brokers, Queen's Chambers, Market-street (June 26), write:—The improvement noticed last week as following the announcement of the reduction of the Bank rate has not continued, notwithstanding that the rate keeps so low. An operation seems to be in progress in the deferred stocks of our home lines somewhat similar to the "bear" raid in Americans, and this is, of course, assisted by the general indisposition to move on the part of the public, and also of dealers on the eve of and during the settlement commenced yesterday. In some of those affected a further fall is to be noted, and the market almost all round is dull and depressed. A similar feeling is prevalent amongst foreign Government securities, all the changes being adverse excepting in the cases of Argentines and Brazilians, the former being distinctly and the latter a little better. Egyptians are again decidedly lower, the fall in the preference issue being severest. Peruvians (6 per cent. and 5 per cent.) are both down, the former issue severely. Mexican 3 per cent., Russian, Spanish, and Turkish General Debentures, also are all lower. Colonial Government Bonds are quite steady, with no business of importance reported here. In Corporation Stocks figures generally are firm. Blackburn 3½ per cent. is ⅛ to 1 better, but Liverpool 3½ per cent. quote ¼ down. Mexican Railway Stock, though the traffic return (6800*l.* decrease) was considerably better than expectations, and consequently so far satisfactory, have receded in price in sympathy with the general tenor of the other markets.

BANKS have the lion's share of the miscellaneous business doing, and values are remarkably steady, the only actual change being a rise of ½ in National Provincial new shares.

ISSURANCE still record no approach to activity, the business marked being straggling and very meagre in amount. Quotations, where changed, all show adverse tendency, Maritime being ⅛, Liverpool and London and Globe 5/16 to 7/16, Lancashire ¼, British Re-Insurance 6d. to 2s., National Boiler 1/16, and Royal (Liverpool) 1/16 to 3/16 down.

COAL, IRON, &c., AND MINING.—A few transactions in Ebbw Vales at advancing figures, and some little other desultory dealings are all recorded herein for the week. Quotations are not much varied.—Higher: A. Knowles and Sons ¼, and Ebbw Vale, ¾ to 1.—Lower: Telegraph Construction and Maintenance, 1; John Brown's, ½; R. Hornsley and Sons, ¼; and Tharsis Sulphur and Copper, 1/16 to ⅛.

COTTON SPINNING, &c. SHARES.—No change to report in the aspect of the market. Prices keep steady, although there is very little doing.—TELEGRAPHS: Anglo Pref. Directs and Globe Pref better; Eastern easier.—TELEPHONES: Uniteds 1 and Lancashire and Cheshires 9d higher. No other alteration to report. MISCELLANEOUS, beyond decline of 1½ to 2 in Suez Canal, and 2 to 3 in Gas Light and Coke A ordinary, nothing worth specially naming.—RAILWAYS: The low price of money does not give stability to prices, and as there is a persisting selling of deferred stocks serious reductions have to be recorded in Great Northerns, Brightons, South Easterns and Sheffields. Metropolitan Districts have been attacked to-day too. Great Westerns, Londons, Midlands, North Eastern and Scotch stocks however keep steady. Present prices of deferred stocks should induce some buying and laying by, as doubtless a 12 months' lock-up would yield a handsome profit. Canadians keep fairly steady, notwithstanding the heavy decrease in traffic announced to-day. In Americans the raid continues, and notwithstanding the announcement of a 6 per cent. dividend on Lake Shores after a rumour of *nil*, further pressure has been put on them, and the whole market is more or less similarly affected, especially what are considered first-class securities. The only way apparently to stop these unscrupulous attacks is buying and taking up, and sticking to, and not being frightened out of holding by rumours and fluctuations.

NEWCASTLE-ON-TYNE STOCK EXCHANGE.—Mr. ARTHUR C. ALLISON, stock and share broker, Grey-street (June 26), writes:—Very little business done, on account of the holidays, this being race week. Markets generally have been dull, and prices lower. Bolckow and Vaughan, 5 per cent. Pref.; Newcastle Chemical, North-Eastern Bank, Tharsis' Sulphur and Copper Company, and Swan United Electric Light, are 2s. 6d., 2s. 6d., 2s. 6d., 2s. 6d., and 7s. 6d. lower respectively, whilst West Cumberland Iron and Steel Company and Newcastle Water are 2*l.* and 10s. higher respectively. Subjoined are the current prices:—Barrow Hematite Steel, 7; ditto 6 per cent. pref., 9; Bede Metal Company, 12½; Bolckow and Vaughan, 12*l.* paid, 9⅞; ditto, 20*l.* paid, 17¾; ditto 5 per cent. pref., 19; Byker Bridge, 13½; Cashwell Lead, 34s.; Consett Iron, 17¾; ditto Spanish Ore, 57s.; ditto Water, 6½; Darlington Steel and Iron Company, 2?s.; Green Hurth Mine, 5*l.* 10s.; Hartlepool Gas and Water, A, 9⅞; ditto, B, 8¾; ditto, C, 7¾; Healeyfield Mining, 5s. 3d.; High Gosforth Park, 19; John Abbot and Company, 45; Langdale's Chemical Manure, 3½; Lawes' Chemical Manure, 4¼; Maryport and Carlisle Railway, 183; Newcastle and Gateshead Gas, 173½; ditto Water, 194½; ditto 5 per cent. pref., 133; Newcastle Chemical, 20s.; ditto Commercial Insurance, 13s.; ditto Grain and General Warehousing, 2¾; Nenthead and Tynedale Lead and Zinc, 10s. dis.; North Green Hurth Mining, 20s; North-Eastern Banking, 6½; Northern Maritime Insurance, 4; Palmer's Shipbuilding and Iron Company, A, 24¾; ditto, B, 14¾; Redheugh Bridge, 12; Sadler and Co., 15; Sir W. G. Armstrong and Mitchell, 124¼; South Shields Gas, 180; Sunderland Gas, 190; ditto and South Shields Water, 220; Swan United Electric Light, 5s.; Tees-side Iron and Engine Works, 5*l.* paid, 12s. 6d; ditto, 2*l.* paid, 1½; Tharsis Sulphur and Copper, 5*l.* 18s 6d.; Tyne Forge, 6; Tyne Steam Shipping, 13½; Tynemouth Gas, 180; West Cumberland Iron and Steel, 5.

— Mr. S. N. CHALLONER, stock and share broker (June 26), reports:—Coal, Iron, and Copper Shares; Barrow Steel Ordinary are 5¼ to 6¼; ditto Six per Cent. Preference, 8⅛ to 9⅛; Bede Metal, 11 to 12; Bolckow fully paid, 17⅛ to 17⅜; ditto 12*l.* paid, 9⅜ to 10; and Five per Cent. Preference, 19 to 19¼; C. Cammell and Co., 68 to 68⅛; Consett Iron, 17⅞ to 18⅛; Consett Spanish Ore, 56s. to 60s.; Darlington Iron, 20s. to 22s. 6d.; Seven per Cent. Preference, 3 to 4⅛; Earle's Shipbuilding, 14 to 15; Ebbw Vales, 4 to 4¼; John Abbots, 45 to 46; John Brown, 59 to 59½; Mason and Barry, 8½ to 9; Palmer A, 24¼ to 24¾; B, 14⅛ to 14¾; Panuicillo Copper, 4 to 4⅛; Steel Company of Scotland, 6¾ to 6⅞; Rio Tinto, 14⅛ to 15; Sir W. G. Armstrong, Mitchells, and Co., 124⅛ to 125⅛; Tharsis, 5¾ to 5⅞; West Cumberland Iron 22*l.* paid, 5 to 5⅛.—Gas and Water Shares: Hartlepool Gas and Water A, 9⅞ to 10⅛; B, 8¾ to 8⅞; C, 7⅛ to 7¾; D, fully-paid, 14⅞ to 15⅛; D, 5*l.* paid, 7⅛ to 8; Newcastle and Gateshead Gas, 174 to 175; Newcastle Water (Original), 194½ to 195½; New Ordinary shares, 2*l.* 10s. paid, 4¾ to 4¾; Five per Cent. Preference, 130 to 132; North Shields Water, 40 to 41; South Shields Gas, 180 to 185.—Miscellaneous Shares: Byker Bridge, 10 to 10⅛; High Gosforth Park, 20 to 21; Langdales, 3⅜ to 3½; Lawes' Ordinary, 4⅞ to 5; ditto Seven per Cent. Preference, 10 to 10¼; Newcastle Chemicals, 20s. to 22s. 6d.; Sadler, Forbes, Abbotts, 15*l.* paid, 15 to 15¼; New, 2*l.* paid, 2½ to 2¾; Slaten Chemical, 9¼ to 9¾; North Eastern Bank, 6 to 6¼.—Local Railways: Cockermouth, Keswick, and Penrith, Ordinary, 97 to 98; Cleator and Workington Junction Four per Cent. Preference, 103¼ to 104; Maryport and Carlisle, 188 to 190; Whitby, Redcar, Middlesborough, 20 to 22.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, stockbroker and ironbroker (June 26), writes:—During the past week business has been quiet, and prices show a drooping tendency, owing to the renewal of unfavourable reports from America. Buyers are still holding aloof. The new account is now commenced for settlement July 11.

In shares of coal, iron, and steel companies there has been little business doing. Ebbw Vales have recovered to 82s. 6d. Mount Kemble Coal and Iron wanted. Marbellas are at 44s. to 46s., and Steel Company of Scotland 6⅜ to 6½.

In shares of foreign copper concerns prices do not show much alteration. Arizonas have improved from 15s. to 17s. 6d.; and it is expected that smelting operations will be commenced at once. Tharsis have declined from 5*l.* 19s. 6d. to 5*l.* 16s. Canada Copper are at 2s. 6d. to 3s. 6d.

In shares of home mines prices are steady. The last sale of the Glasgow Caradon was a small one, and the total this year is only 230 tons, realising 691*l.*, against 525 tons, and 2182*l.* at corresponding period of last year. Anderton are 10s. to 15s.; Bickton, 15s. to 20s.; Camborne Vean, 1s. to 2s.; Carn Camborne, 5s. to 7s.; Carnarvon, 2s. 6d. to 5s.; Devon Friendship, 1s. to 2s.; D'Eresby Mountain, 4s. to 6s.; Devon Consols, 50s. to 60s.; Drakewalls, 3s. 9d. to 5s.; East Wheal Rose, 8s. 9d.; to 10s.; East Caradon, 1s. to 3s.; Ecton, 22s.6d. to 27s. 6d.; Goginan, 1s. to 2s.; Gorsedd and Merllyn, 10s. to 15s.; Gunnislake (Clitters), 10s. to 15s.; Marke Valley, 6s.; Mostyn Consols, 20s. to 25s.; North Busy, 6d.; New Terras, 7s. 6d. to 10s.; North Blue Hills, 6d. to 1s.; Old Gunnislake, 2s. 6d. to 5s.; Old Shepherds, 10s. to 12s.; Prince of Wales, 3s. to 5s.; South Crofty, 71s. 3d.; St. Just United, 7s. to 10s.; Tregontress, 2s. 6d. to 5s.; Tresavean, 5s. to 7s.; Tankerville, 6d.; Trevaunance, 39s.; West Basset, 76s. 3d.; West Crebor, 3s. to 5s.; West Holway, 2s. 6d. to 5s.; West Phœnix, 3s. 6d.; West Poldice, 6s.; West Polbreen, 16s. 3d.; West Seton, 4½ to 5; Wheal Basset, 70s.; Wheal Crebor, 30s.; and Wheal Jane, 1s. 6d.

In shares of gold and silver mines there has been less business doing. Montanas 41s. to 43s, Richmonds and United Mexicans both easier. Appolonias are at 15s.; African Gold Coast Syndicate, 62s. 6d.; Argenta Falls Silver, 10s.; Akankoo, 8s. to 10s.; Antioquia, 1s. to 3s.; Colombian Hydraulic, 8s. to 9s.; California, 12s. to 14s.; Cankim Bamoo, 5s to 7s.; Crookes' Mining, 17s. 6d. to 20s.; Cartago, 4s. to 6s.; Chile, 4s. to 6s.; Flagstaff, 9d. to 1s. 3d.; Frontino, 10s. to 12s.; Guinea Coast, 1s. to 2s.; Isabelle, 2s. 6d. to 5s.; Javali, 1s. 6d. to 2s. 6d.; Kobinoor (B), 2s. to 4s.; Kapanga, 3s. to 4s.; New Potosi, 11s. to 12s.; Orita, 16s. to 18s.; Organos, 16s. to 18s.; Schwab's Gully, 6 to 6½; Silver Peak, 1s.; Tacquah, 6d. to 1s. 6d; and Victoria, 11s. 3d. to 12s. 6d.

In shares of oil and miscellaneous companies there is no particular change to notice. Oil companies shares are steady, notwithstanding the heavy fall in the price of American petroleum. Home Mines Trust are 8s. to 9s.; Lawes' Chemicals, 4¾ to 5. Nobel's Explosives declined from 14*l.* 3s. 9d. to 13*l.* 10s., but are now firmer. Sadler and Company, ⅛ dis. to ⅛ prem.; and York Engineering offered.

EDINBURGH.—Messrs. THOS. MILLER and SONS, stock and share brokers, Princes-street (June 25), write:—There has been a general fall in home railways since last report; Americans have also been flat on New York quotations, and Canadians have declined. Very little has been done in preference stocks, which show few changes. Prairie Cattle shares have improved. Oil shares are in several instances lower. Since Wednesday last week Caledonian has declined from 93 to 92⅝, Great North from 42 to 40½, Highland from 88¼ to 87½, North British from 93½ to 92⅞, Edinburgh and Glasgow from 34⅜ to 33⅞. Grand Trunk has fallen from 8⅝ to 8⅜, the Second Preference from 53¼ to 50⅜. the Third from 23½ to 22¼. In banks Clydesdale have risen from 21 to 21¾, while Royal has receded from 214 to 213. Canada North-West Land has advanced from 40s. 3d. to 43s. 9d., Prairie First from 6½ to 6 11/16, Second from 6¾ to 7 5/16, Third from 7¾ to 8. In mines Arizonas have improved from 16s. to 17s. 6d., the New from 12s. 6d. to 13s. 6d. Dalmeny Oil have fallen from 19¾ to 19, Lanark from 5⅝ to 5 7/16. Midlothian from 97s. to 92s. 6d.

WATSON BROTHERS MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c
1, ST MICHAEL'S ALLEY CORNHILL, LONDON

We have received several communications in regard to Wheal Peevor and the proposed amalgamation with West Peevor; also in reference to our remarks of last week. We are now told that although, 1. West Peevor took its name *after* Wheal Peevor became rich; 2. That the agents of the latter became the agents of the former; 3. That operations were then commenced near the boundary of Wheal Peevor; 4. That it was in consequence of its change of name and the richness of Wheal Peevor near the boundary that people were induced to give such a high price for its shares; that the mine was in existence as "New Treleigh," and belonged to another proprietary before even Wheal Peevor Company was formed. Thus we are told the transactions connected with it were relieved from the responsibilities we referred to. The agents, in fact, purchased shares, and not the lease. In regard to the amalgamation, it is proposed to make the joint company into 6000 shares (each at present is in 3000), so that a holder of 20-3000ths shares in Wheal Peevor would have 20-6000ths in the Amalgamated Company, and *vice versa*. By this means the mines could be worked cheaper and more expeditiously, the dues will be remitted on both mines, and the tin near the boundary can be taken away. There would of course, be only one set of agencies and other expenses where there are now two; and, looked at in this way, the amalgamation seems desirable.

The price of ore at the Eastern sales is affected in this way. The average produce—that is, the percentage of all the ores offered for sale, is taken, and upon this average the standard or the price per unit to be paid for all the ores is regulated and based. The richer the ores are the higher the price given for it. Thus 10 per cent. ores might fetch 10s. per unit, or 5*l.* per ton, while 5 per cent. ore would not bring more than 8s. or 9s. per unit. Now, the average produce of the last Eastern sale was 5¾, and the average price of ores sold 2*l.* 9s. 6d. per ton; but Crebor and other ores were far above this produce, and the average which regulates the price per unit was brought down by the large sale of low-priced ores by Devon Great Consols.

If the shareholders do not come forward at once and take up their proportion of the 1000*l.* 10 per cent. debentures in the D'Eresby Mountain they may lose all interest in the mine just at a time it is beginning to pay, and after an expenditure of more than 20,000*l.* We cannot go on making further advances if the shareholders show no desire to save a valuable property, and it may fall into the hands of the debenture holders if outsiders take them up. We have taken more than our proportion.

There are exceptionable cases in most affairs, but no such case ever occurred under the Cost-book System, or ever could occur, as the imaginary one referred to. Dolcoath and other Cost-book mines are the only ones that keep their price and command purchasers in these *dull times*.

A few tons of blende and two or three small parcels of silver ores have been dressed at New Langford, and will be sold as test samples, though these small quantities seldom bring good prices. The prospects of the mine are good, but it is no use trying to deal in anything these times.

The discovery in West Frances is a most important one, and if it continues, and there seems every probability that it will, the mine must make large profits. The shares are nearly all held in Cornwall. The last call would pay off all the debts, and the mine will make a profit of about 1000*l.* next account. The course of tin on the Great Flat lode is opening out well, the rise having gone up 70 fms. worth, we are told, 50*l.* per fathom.

Since writing the above the purser of Wheal Peevor has informed us that the effect of amalgamating the mines would be to lessen the staff; make one set of stamps do the work of both mines; lessen cost of dressing and burning to the extent of 100*l.* a month; enable the company to take up such levels as are driven to the boundary in Wheal Peevor, and carry them into West Peevor, and generally work the mines so much more expeditiously and cheaply that probably they might again be brought into a paying state.

Mining Correspondence.

BRITISH MINES.

ANDERTON.—W. J. Bowhay, June 25: I am glad to be able to report that we have cut the lode in the 20, west of cross-course, and so far as yet seen it is a strong masterly lode, at present composed of peach, mundic, and copper ore, but is so far poor for tin. We have cut into it 6 ft. and have not got through it. Our drivage is close by the cross-course, and there the lode at present is a little disordered, so that its character cannot well be determined, but all the indications lead me to the belief that we are likely to have a tin lode of the character we have in adit level at the same point. A few days will enable us to speak of it with more certainty. So far as seen I am well pleased with it. The stope east of the cross-course is yielding splendid tinstuff for the stamps. In the winze sinking west of the old winze in the adit we have tinstuff as good as what we had in the winze before the water drove us out, and the water in this winze is fast going down since we cut into the lode in the 20 west. We only want wet weather to enable us to make good returns; but the dry weather has interfered with our surface operations very much.

BEDFORD UNITED.—H. Trezise, June 24: The lode in the 138, east on the north lode, is looking more promising; it is producing good saving work.—McCallan's Shaft, Bridge Lode: The lode in the 75 east and west is without change, but giving out water freely. In the 62 east the lode is not taken down. In the 62 west the lode is 3 ft. wide, of a very promising character, and worth 8*l.* per fathom. The stopes at the 62 are without alteration. In the 42 east the lode is much the same as when last reported. The several stopes in the back and bottom of the 42 are without alteration.

CARN CAMBORNE.—W. C. Vivian, June 26: In driving the 105 cross-cut south beyond the first lode intersected we have advanced 6½ fms., and have in the last few feet met with a little water (of which we previously had none), and I have also found the granite traversed by heads or joints, and the faces of the rock coated with lode minerals. These features encourage the hope that there is a lode before us, and it may be the continuation in depth of the one which yielded so much rich copper and tin ore above the 95. I have resumed driving the 105, west of cross-cut, on the first lode intersected, as the results of rising over the level (referred to in my last report) have not led to any discovery worthy of being prosecuted further. I trust that in driving west we may be most successful.

CATHEDRAL CONSOLS.—S. Davey, S. Davey, jun., June 26: Setting Report: The 84 cross-cut to drive south by eight men and four boys, at 14*l.* per fathom: we just now cut another lode or branch, which is 14 fms. 3 ft. south of the engine-shaft, and is 2 ft. wide, composed of capel, quartz, and producing rich stones of yellow copper ore. We advised to open on the course of this lode when the great south lode is intersected. The 84 to drive west by six men, at 7*l.* 10*s.* per fathom; lode 2 ft. wide, composed of quartz, fluor-spar, producing rich stones of copper ore. We have at present in the end a highly mineralised granite, and are daily expecting an improvement.

OWM DWYFOR AND BRYNARIAN (Brynarian Mine).—J. Davis, June 26: In Boundary level we have just cut a joint coming across the end; it contains about 8 in. of soft stuff, and is dipping south; this no doubt will have some effect on the lode in a few fathoms drivage.

DEVON FRIENDSHIP.—F. R. W. Daw, June 26: The 42 end, east of Bennett's engine-shaft, is set to two men, at 8*l.* per fathom; the lode is 2 ft. 6 in. wide, and worth about 8*l.* 15*s.* per fathom. The cross-cut south at this level is set to two men, at 4*l.* per fathom. Densham's stope in the back of this level, west of Bennett's shaft, is set to two men, at 1*l.* 15*s.* per fathom; the lode is worth 7*l.* per fathom: Floyd's stope is set to two men, at 1*l.* 12*s.* 6*d.* per fathom; the lode is worth 6*l.* per fathom. Densham's stope in the back of the 30, west of Bennett's shaft, is set to two men, at 1*l.* 16*s.* 6*d.* per fathom; the lode is worth about 8*l.* per fathom. Floyd's stope in the back of this level is set to two men, at 1*l.* 10*s.* per fathom; the lode is worth 10*l.* per fathom. We put two men to rise in the back of the 12, at 4*l.* per fathom; the lode is worth 7*l.* per fathom for copper ore. Two men driving east of ladder winze in the bottom of the adit level is set at 3*l.* 15*s.*; the lode is worth 8*l.* per fathom. Rickard's stope in the bottom of this level is set to two men, at 1*l.* 15*s.* per fm.; the lode is worth 7*l.* per fathom. We put two men to drive west of ladder winze, at 3*l.* 15*s.* per fathom; the lode is worth 6*l.* per fathom.—Surface: The machinery for dressing and calcining is working well.

DEVON GREAT CONSOLS.—Isaac Richards, June 26: Wheal Maria, North Lode: The cutting down and timbering of the eastern shaft above the adit is being got on with as fast as possible.—Wheal Emma, New Shaft, New South Lode: In the 205 east the lode (3 ft. wide being carried) yields a little good quality copper ore and 2 tons of mundic per fathom.—Railway Shaft: In the Railway shaft sinking below the 205, and which is now almost reaching the required depth for another level (at the 220), the ground continues without important alteration. In the 205, west on the south part of the lode, the part carrying (2½ ft. wide) is composed of capel and quartz, with small quantities of copper and mundic ores. In the 160, west on the south part of the lode, the lode is 1 ft. wide, and yields a little copper and mundic ores.—Watson's: In the 112, east of the engine-shaft, the lode is 5 ft. wide, composed of very strong capel and quartz, mundic, and a little copper ores. In the 112, west of the engine-shaft, the lode continues of good size (5 ft. wide), and yields 2 tons of copper and mundic ores per fathom. At the western shaft the cutting of plat at the 32 is completed, and the shaft is again being sunk below this level on the north side of the lode in ground of a favourable nature for exploration. The lode in the Midway shaft, sinking below the 20, is 3 ft. wide, yielding some saving work for copper and mundic ores.

DEVON GREAT UNITED.—Isaac Richards, June 26: In the 120, east of Willesford's shaft, lode is 4 ft. wide, of a very promising character, and worth 1 ton of copper ore per fm. In the 120, west of Willesford's shaft, lode is 2 ft. wide, composed principally of capel and quartz, with small quantities of copper and mundic ores. The other points of operation are without important alteration. We shall have ready for sampling to-morrow about 90 tons of fair average quality copper ore.

D'ERESBY MOUNTAIN.—J. Roberts, W. Sandoe, June 25: In the bottom of No. 6 we are now stoping forth the south end of the sink to square up to the new shaft; at this point the lode is worth about 1½ ton of lead ore per fm. The richer part of the lode is in the north end and middle of the sink, but this will all stope away in order, as the shaft is being sunk deeper for the convenience of stoping. We are also engaged stoping down the small bit of ground just above the No. 6, to complete the shaft at this point, which it was not convenient for us to do while the men were working above it. The lode here is yielding saving work for the wash floors. Owing to the continuance of dry weather we have scarcely any water for dressing purposes.

DRAKEWALLS UNITED.—M. Bawden, June 26: Setting Report: The 90 to drive west of engine shaft by six men; the branches in this end are producing a little tin ore, but not to value. Rise in back of the 40, west of engine-shaft, to four men, at 4*l.* 10*s.* per fm. Winze in bottom of shallow adit against said rise by four men, at 6*l.* per fathom. On these two points being communicated the ground will be set on tribute at about 10*s.* in 1*l.* Stope in the bottom of deep adit, east of Mathew's shaft, by four men, at 3*l.* per fathom. We have on tribute four men in the back of the 90, west of engine-shaft; four men in back of 80, west of ditto; four men in back of deep adit ditto; eight men in back of 40 ditto; 12 men in bottom of shallow adit ditto; four men in bottom of deep adit, east of Mathew's shaft; ten men in back of deep adit ditto. All the above are at 10*s.* in 1*l.*, with a standard of 45*l.* per ton of black tin. Six men tramming and filling, one pitman, and one timberman. Total number of men employed underground, 72. We are sorry to have still to report that the ground below deep adit has not been nearly so productive of tin ore as we were led to expect or believed we should have found it. We shall push on the 90 west as fast as possible to get into more settled ground before cross-cutting north to see if there are more profitable branches standing in that direction. We sold on the 19th inst. 16 tons 13 cwts. 2 qrs 5 lbs.

DUCHY PERU.—R. and J. Nancarrow, June 23: Since our last report we have continued cross-cutting through the lode at the 80, but have not yet got through it; this shows the lode to be increasing in size. About a week ago we came into a vugh, and a large stream of water almost like a waterfall, in fact, so powerful that it gained on the engine for a time. This we consider to be a good indication for an increase of mineral. Last Thursday we stopped the engine, and took out a piece of main rod which was gone very bad; this has been replaced by a new one, and working well, and we hope to fork the water again by to-morrow. The lode in the winze sinking below the 70 on No. 1 lead lode is larger, and of a very promising appearance, looking very masterly, and producing good lead work. We have resumed the driving of the 70 west, where the lode for width of whole end is producing saving work for lead, and looking very encouraging for the future; how wide the lode is here we do not know, but we purpose cross-cutting through it in a few fathoms further driving to ascertain its full size and value. Above this level we have set a new pitch, which is producing good quality blende. The other pitches throughout are generally improved. We sampled 130 tons of good quality blende last week, and are progressing favourably with the dressing of others. All surface operations are going on well, and the pumping, winding, and crushing machinery all in good order.

EAST BLUE HILLS.—S. Bennetts, W. K. Mitchell, June 25: There is not much alteration to notice in the value of the lode in the engine-shaft—varying from 10*l.* to 12*l.* per fathom; it, however, seems to get wider as we get deeper, and is now 2½ to 3 ft. wide, and altogether a most promising lode. Preparations are being made towards fixing the skip-road, ladder-way, &c., for getting away the stuff through this shaft as soon as the 10 fm. level is reached, and a few feet sunk below for trip-plat, &c.

EAST WHEAL LOVELL.—T. Quentrall, June 25: In the engine-shaft we have a well-defined and very promising lode, 2 ft. wide, and yielding some good tinstuff; it is of a very promising character for a speedy improvement, and the ground is very favourable. The south lode has rather improved since last week, and there is a good run of tin ground gone down below the shallow level just east of this shaft.

GAWTON.—Moses Bawden, June 26: Setting Report: The 117 to drive east of engine-shaft, by four men, at 13*l.* per fathom; the part of the lode carried is 5 ft. wide, and is still yielding some stones of copper ore and arsenical mundic, but not to value. The 95 fm. level to drive east, by four men, at 13*l.* per fathom; lode 4 ft. wide, yielding 5 tons of good quality arsenical mundic per fathom. The 70 to drive east, by two men, at 12*l.* 10*s.* per fathom; lode 6 ft. wide, yielding 10 tons of arsenical mundic per fathom.

The 50 to drive east of cross-cut, east of engine-shaft, by four men, at 6*l.* per fathom; the lode at this point is laid open for 5 ft. wide, and will yield 8 tons of mundic per fathom, and although this part of the lode contains a little more sulphur mundic than we care to see we look at this as a most important point, as we consider it proves that the south or mundic part of the lode is standing to the south throughout the mine both above and below this point. Rise in back of 105 east, by four men, at 13*l.* per fathom. We hope to communicate this rise to the 95 east during this week. No. 1 stope in back of 117 east, by four men, at 8*l.* per fathom. No. 2 stope in back of 117 east, by four men, at 5*l.* 10*s.* per fathom. A stope in back of 82 east, by four men, at 5*l.* 5*s.* per fathom. A stope in back of 70 west, by four men, at 8*l.* 5*s.* per fathom. A stope in back of 70 east, by two men, at 5*l.* 10*s.* per fathom. A stope in back of 60 east, by four men, at 5*l.* per fathom.

Our stopes will yield on an average 8 tons of arsenical mundic per fathom. We are finding a little more low class copper ore in our lode, and hope to see the quantity still further increased. It is our intention to drive a cross-cut north in the 103 east to cut the north or copper-bearing portion of the lode, which has not been worked on for several years past, and we trust at the point we are about intersect to find it profitable. As I have before stated, a very small discovery of copper ore would mean a profit to the company, even with metals at the present very low prices.

GREEN HURTH.—J. Polgiase, June 19: The 44 end, north of Swan shaft, is worth ¼ ton per fathom. No. 1 stope is worth 2 tons per fathom. No. 2 stope is 2 tons per fathom. No. 4 stope is worth 2 tons per fathom. No. 5 stope is worth 2 tons per fathom. No. 6 stope is worth 2 tons per fathom. No. 7 stope back of Standage level is worth 4 tons per fathom. The 30 north is the same as last reported. The men are getting out their work, &c. Dressing going on well.

HEALEYFIELD.—J. Trelease, June 20: We are getting the pitwork to the shaft top as quickly as possible, and are busy drawing the water. We hope to get the water out of the shaft by Monday morning, and a start to drop in the pitwork on that day. Everything is being carried on with the utmost dispatch. The crushing machinery has been renovated, and started again yesterday. There is no change in the tribute stopes this week. Machinery working satisfactorily. We will complete the delivery of last parcel of ore to-morrow; if we have a full water supply we hope to get forward the usual quantity of ore for the month.

HINGSTON DOWN CONSOLS.—T. Richards, June 23: In the cross-cut at the 52 the No. 2 lode is cut through, which is fully 3 ft. wide; much of the same character as last advised, being principally capel, with some quartz spotted with mundic, and in places a little copper ore.

KIT HILL GREAT CONSOLS.—Isaac Richards, June 26: At the tunnel level very fair progress is being made, 2 fms. 3 ft. having been driven during the past week.—North Engine Shaft: Our progress in cutting plat at the 100 fm. level is progressing satisfactorily. In the 88 west the lode is 5 ft. wide, and its general character is of a most promising nature. There is no important alteration at any of the other points of operation since last advice. The machinery throughout the mine is in good condition and working well.

LOVELL.—J. Prisk, June 26: Air Shaft: The lode in the 22 west has been disordered, but we now have good work for tin in the back of the level, which indicates that the principal dip of the ore is west, and I am looking forward to a good improvement here daily. The lode in the stope in the back of the 14 is worth 6*l.*, working at 2*l.* per fathom.—Engine-Shaft: The lode in the 14 west is 4 ft. wide, worth 8*l.* per fathom. The lode in the rise in back of said level is worth 7*l.* per fathom. The lode in the 14 west is 4 ft. wide, worth 6*l.* per fathom. These two points are suspended for the present, the water for the stamps being very little, and only the best paying tinstuff can during the dry season be treated. The prospects, on the whole, are very good.

MARKE VALLEY.—William George, Francis Renals, June 26: Wheal Jenkin: To drive the 25 east from Bellingham's shaft, on the course of the lode, by four men, at 11*l.* per fm.; the part carried, about 6 ft. wide, is improving, now yielding fair stamping work. To drive the 15 cross-cut south by two men, at 8*l.* per fathom. To stope the back of this level, east of cross-course, by two men, at 4*l.* 10*s.*; here we are only carrying about 4 ft. of the lode, which is quite equal to the average stuff broken west of cross-course. Three stopes are being worked in back of this level, west of cross-course, by 16 men. We are at present carrying about 18 ft. of the lode, which is yielding fair average stamping work, and we find little or no difference from that formerly reported. We are urging on the surface work as fast as possible. At Marke Valley we have set two tribute pitches to four men, at 13*s.* 4*d.* in 1*l.*

MELLANEAR.—John Gilbert, June 25: The new lode in the winze sinking below the 30, south of Gundry's shaft, is 1½ ft. wide, and yielding some mundic and occasional stones of rich copper ore, but it is more disordered than it was a few days ago. In the 70 cross-cut north from main lode the ground is looking very promising for mineral, letting out an increased quantity of water, and favourable for driving. The lode in the 100, west of shaft, is 4 ft. wide, yielding 2 tons of ore per fathom, letting out more water and better for driving. The lode in the 110, west of shaft, is 5 ft. wide, yielding 1 ton of copper ore per fathom, and some saving work for tin. In the 110, east of shaft, the lode is 4 ft. wide, and yielding ½ ton of copper ore per fathom. In the 120, east of shaft, the lode is 3 ft. wide, and yielding ½ ton of ore per fathom. The rise in the back of this level is yielding 1¼ ton of ore per fathom. In the 120, west of shaft, the lode is 4 ft. wide, and yielding 1¼ ton of ore per fathom. The lode in Gundry's shaft, sinking below the 120, is 5 ft. wide, and yielding 2¼ tons of ore per fathom. There is no change in any other part of the mine.

MID-DEVON COPPER.—J. Neill, June 21: A Shaft: The continued drought is reducing our surface water materially; wheel is now making 2¾ revolutions per minute, and water in shaft is 11 ft. below the 70.—C Shaft: The stope in back of cross-cut, north from 50 east, worked by four men, has not materially changed in yield of ore or composition of strata since last report. It still yields 1¼ ton of ore per cubic fathom.

NEW BROOKWOOD.—J. Browning, June 26: We are striking the shaft with all possible speed; the heaviest part of the whim has been erected, and we expect to get it completed in the course of a few days.

NEW CARADON.—N. Richards, June 25: All the points in operation throughout the mine are being urged on as fast as the nature of the work will admit. No. 1 lode in the winze sinking below the 50, east of cross-course, is now 2 ft. wide, but although larger than when last reported, it is not producing quite as much copper ore; this we do not much notice as we are sinking near the cross-course, and the lode having a very promising appearance it may improve almost any day. We intend to try this lode at different points before we recommence the sinking of Dawe's shaft below the 50, or even drive west into the hill. We have cleared and secured the cross-cut north at this level, and have some other levels to clear; one of these is at the 40, east of main cross-course, where near the cross-course the lode is large and kindly, and if it is found the same in the extreme end, we shall drive on its course to prove it. The lode we are driving on, east of main cross-course at the 20 is producing saving work for copper, a kindly looking lode.

NEW KITTY.—Wm. Vivian, June 26: The 50 fm. level driving west of cross-cut lode about 2 ft. wide, producing a little tin, but not to value. Thomas shaft sinking below the 20 fm. level; lode of a very promising character, producing tin, copper, and mundic. The 20 fm. driving east; lode at this point also presenting good indications.

NEW LANGFORD.—T. Gregory, June 25: The lode in the 23 east is of the same favourable character and value for ore as last week. In the 20 fm. level stopes, west of engine-shaft, the lode going into new ground is producing good lead and blende, with occasional patches of silvery gossan. In clearing the 10 we find the lode has been left for some distance, which on taking of it down produces good lead and blende that will work on tribute. The pitches are producing their usual quantities of ore, and the dressing by the tributers is progressing favourably.

NEW TERRAS.—R. Eade, June 26: I am pleased to say the course adopted by Mr. James will eventually supply us with sufficient water to keep our stamps, &c., fully supplied. We have an increase already, and have partially resumed working again. We have reached the lode in the deep adit, and find it about 3 ft. wide, producing good work for tin. The stopes and all other parts of the mine are much the same as last reported.

NEW THUMPET CONSOLS.—Thomas Quentrall, June 26: Trenethick shaft is being sunk as rapidly as possible, and the lode is gradually improving as we get deeper. It is now producing some very good tinstuff, and also some rich stones of grey copper ore. The lode in the 28 west is worth 12*l.* per fathom for copper ore, and the stopes in the back of this level are worth from 10*l.* to 12*l.* per fathom. The stope in the back of the 16 west is worth 8*l.* per fathom. We sampled on the 17th inst. about 28 tons of copper ore, and the mine is opening out very satisfactorily.

NEW WEST CARADON.—N. Richards, June 25: No. 5 lode, at the 33, east of Hallett's cross-course, is 3½ ft. wide, and will now yield from 1 to 1½ ton of copper ore per fathom; a pretty-looking lode. When this level is extended a short distance further we shall rise and sink on the lode to prove its value above and below this level. This lode, west of cross-course, is 18 in. wide, showing spots of copper ore. The cross-cut driving south at this level is being driven through a favourable channel of ground for the production of copper ore.

NORTH BLUE HILLS.—S. Bennetts, June 25: The securing of the open cutting of adit tail, &c., from accidents to cattle, &c., is completed, and the men are again employed in driving the deep adit end west on the lode, which, since passing a small cross-course, has improved, and the ground a little harder.

NORTH GREEN HURTH.—J. Polgiase, June 19: There is no change to notice in the south end; the vein continues about the same as for some time past. The level in Hospital property has not intersected any vein yet. We are busy about the air machine, wheel, &c.

NORTH PENSTRUTHAL.—S. Davey, June 24: We shall start the cross-cut at the 165 by the end of the week. I am very anxious, and hope to meet with something good.

NORTH TRESKERBY.—Pryor and Son, June 26: Setting Report: The deep adit level to drive east of cross-cut on No. 1 lode, by two men, at 4*l.* 10*s.* per fm., where the lode is 3 ft. wide, and worth 16*l.* per fathom. This end is driven east of cross-cut 8½ fms. This level to drive west of cross-cut, by two men, at 4*l.* 10*s.* per fathom, in a lode 3½ ft. wide, and worth 16*l.* per fathom; this level is driven west of cross-cut 13 fms. The deep adit level is extended east of cross-cut on the No. 2 lode 3 fms. 2 ft. 6 in., in a lode 2½ ft. wide. Lode in the present end is a little disordered by a cross-head, and worth at present 11*l.* per fathom. This end is suspended for the present, and the men engaged in taking down the lode to the west of the cross-cut, which was left to stand on account of having to drive in a north-westerly direction, in order to communicate to Jabez's shaft for ventilation and discharging the tinstone, &c., at a much cheaper rate. This level is driven in a westerly direction 21 fms.; but only about 6 fms. on the course of the lode. The lode at this point is now worth 14*l.* per fathom, and is being taken down by two men at 1*l.* 15*s.* per fathom.—No. 3 Lode: The deep adit level is driven east of cross-cut in this lode 8 ft. where the lode is 3 ft. wide, and worth 30*l.* per fathom; driving by four men at 5*l.* per fathom. This level is driven west of cross-cut on this lode 3 fms., where the lode is 3 ft. wide, and worth 23*l.* per fm.; driving by four men at 5*l.* per fathom. No. 4 lode, to drive east of cross-cut by two men, at 3*l.* per fathom. Lode 2 ft. wide, and worth 10*l.* per fathom. This is driven west of cross-cut 4 fms. 1 ft. 6 in., which has varied in value, being now worth 8*l.* per fathom; this end is at present suspended, being disordered by the flookan course, which has divided the lode, and we are induced to think there is another portion of the lode still standing to the north, which will be cut into in the course of a fortnight or three weeks' time, the men now being engaged in assisting to make some alterations and repairs to the pitwork at the engine-shaft. The deep county adit cross-cut is also suspended for the present, men being engaged in the same work. The water is drained to the bottom of the engine-shaft, but on account of its being so strongly mineralised with copper the joints of the pumps have to be renewed, which we are pleased to say is being done without any accident or delay. The 80-in. pumping-engine is working splendidly, and our great object in the future in this part is to sink the shaft with all possible speed to come down on the continuous course of copper ore known to exist for over 50 fms. in length, and we estimate the work done by the late company to accomplish this important point cost them at least 11,000*l.*, and of this heavy outlay the present company have the whole benefit. The new winding-engine and steam capstan is completed, and is working admirably—a splendid piece of machinery. The engineers are at present engaged in completing the air-compressor for the effectual working of the rock-drills for rapidly sinking the engine-shaft. The boiler-house is speedily approaching completion, and all other surface work is being carried out with all possible speed.

OKEL TOR.—H. Bulford, J. Rodda, June 26: Lode in new eastern shaft producing saving work for copper and mundic. The north lode in the 90 east is rather sulphury at present. The south lode, in the same level east, is producing 6 tons of arsenical ore per fathom, and saving work for copper. The lode in No. 2 winze, sinking below the 80, is looking well for tin and arsenical ores, producing 16 tons of the latter per fathom. The end driving above the 50 is opening up a good piece of ore ground; lode producing 12 tons of arsenical ore per fathom. The other points are looking just as they have been for some time past.

OLD SHEPHERDS.—R. and J. Nancarrow, June 23: Harvey's shaft men have commenced sinking below the 112 fm. level. Owing to the 112, west on course of lode, being full of stuff and crushed so badly, with a large quantity of water to contend with, our progress is rather slow, but we soon expect to get through this crush, and get to the end, so as to drive and reach the lead ground gone down in the 102. We are glad to say we have been in the end at the 102 west, which is about 35 fms. from the cross-cut, and find the lode about 2 ft. wide, of a very promising appearance. About 6 or 8 ft. behind the end there is a good branch of lead standing in the back, which will be available for stoping in a few days when we shall be able to give you a valuation, and we also purpose to clear up the old bottoms on the rich bunch of lead where the former workers sunk below this level. At the old sump we have nine men engaged clearing up the perpendicular shaft below the 82, and we hope to reach the 92 by the end of this week. As soon as possible we shall fix the skip-road from the 82 to this level, and shall then be in a good position to extend the cross-cut to the north lodes, and also for working the eastern part of the mine, where it is reported a great deal of productive ground is left standing at and near the bottom of Sunny Corner shaft. The tribute pitches are producing the usual quantity of lead Dressing and other surface operations in regular progress. The 80 in. engine, and other machinery working well.

OWEN VEAN AND TREGURTHA DOWNS.—Wm. Derry, H. Prin, Verrant James, June 26: The second two pneumatic stamps were started on Saturday last as promised, and like those previously started perform their work capitally. Some little time is lost in taking up the stretch of the driving belts, and correcting other matters, which always cause delay in starting such a quantity of new appliances simultaneously, but we are using every effort to close up and get in perfect order to run the stamps continually. We are pleased to report that the tin comes out quite equal to our expectations. The masons are building for the new calciner with all possible speed. The engine-shaft is sunk 11 fathoms below the 50. Our setting passed off well last Saturday, the whole of the stopes being taken by the same men, at an average of 19*s.* 8*d.* per fathom. The lode is generally larger, and the stopes yield more tinstuff per fathom on an average than at the previous setting, and on the whole the produce is improved. The 40 end west is set to six men, to drive at 75*s.* per fathom, and the lode there has greatly improved, producing very rich tinstuff, a sample of which has to-day been forwarded to the office. The stamps shaft is secured from surface to a little below adit, and from what we can see it appears to be firm and in excellent condition below this point.

PATTERSYKE AND CLARGILL HEAD.—J. Peart, June 20: Low Level: The rise from top drift is now up 5 fms., and the vein we have makes very little appearance. I have an impression that it has made a slip in the low part of the rise, and is laying off to the west. This ought to be proved, and I have set the men on to cross-cut a fathom or two for that purpose, as the little vein we have seen in the rise is nothing like the mineral and fine pieces of ore we had in the drift. The low level forehead continues about the same. It has been driven this month 10 fms. We are getting the dressing-floors put into order, as we can spare the time.

PRINCE OF WALES.—S. Roberts, June 25: The rise in the back of the 102 east is holed to the 90, and as early as possible we shall commence taking down the lode which is standing through the rise. We shall now resume the drivage of the 102 east on a lode 4 ft. wide, worth 7*l.* per fathom for tin, and indications of an early improvement. In the 102 west the lode is at present small, 1 ft. wide, composed principally of capel, impregnated with tin and copper. Every other point in operation unchanged since last reported on.

POLCREBO.—W. H. Martin, June 25: Highburrow Shaft: In sinking under the 40 level the lode is gradually improving—in fact, I have never seen the lode looking better in the whole of the sinking than it is at the present time, with good indications for further improvement. The lode in the 40 west is a little disordered by a small patch of granite in the lode; this will only continue for a short distance. No alteration to notice in the 40 east. In the 40 east rise the men are making good progress; they are rising in the soft granite to communicate with the 30 to ventilate the levels.—The 30 East: In the present end the ground is very hard; it changed from soft granite to hard granite. We have been driving on the south lode for speed; seeing such a sudden change in the end I have put the men to drive a cross-cut north to intersect the north lode, which is the main tin producing lode, and is standing about 12 ft. north of the level.

ROMAN GRAVELS.—A. Waters and Son, June 26: The 125, going north of new engine-shaft, is in a lode 6 ft. wide (the three divisions having come together), worth quite 4 tons per fathom. The lode in the 125 going south is hove by a small cross-course, 2 to 3 ft., into the east side, and is, therefore, for the present disordered a little. Beyond this cross-branch in the upper levels the Roman lode always improved, and we shall look for a similar change as we go forward here. The lode in the 110 south is still rather narrow; but the country rock is of the right kind and structure, consequently we know that the end will enter more productive ground presently. The 95 south is worth 30 cwts. per fathom, and improving. The 80 south is worth 2 tons per fathom. The 80 cross-cut west into the great spar lode is driven 4½ fms., but there is yet no signs of being through the vein. We have had a rich course of ore on the hanging-wall of said great lode, and are hoping to find something similar on the foot-wall also. The stopes throughout the mine are up to late valuations; 100 tons of lead ore have been sampled to-day.

RUSSELL UNITED.—John Bray, June 26: The ground at Matthew's shaft, sinking below the 97, continues very hard and troublesome. We have not cut south into the lode since last report. Nothing new to report at Stephen's shaft, sinking below the 45.

SOUTH CONDURROW.—Wm. Rich, William Williams, Humphrey King, June 25: The ground is favourable for working in the 54 end, west of Marshall's, and the lode worth 6*l.* per fathom. The 66 end west is in a hard and poor bar of ground. The lode in the rise above the 78 is opening out wider. We hope soon to cut the tin ground gone down in the bottom of the 68 just over this rise. The stope in the back of the 78 east is worth 8*l.* per fathom. The 93 end, west of Marshall's, is in a strong and promising lode, but at present it is unproductive for tin. We are making fairly good progress in sinking Penderves' engine-shaft. There is very little alteration to notice in the bargains or pitches on the main tin lode since our report of last week. We are sending to the smelting-house to-day our past fortnight's tin, about 22 tons.

SOUTH DARREN.—John Mitchell, June 26: The following bargains were set on Saturday last for one month:—To drive the 130 east, by four men, at 9*l.* per fathom; the lode here is getting stronger, and we expect soon to cut the run of ore we had in the level above. To drive the 139 west, by four men, at 9*l.* 15*s.* per fathom; the lode continues wide and strong, and is worth 2 tons of silver-lead ore per fathom. For the last 17 fms. driven here there is a fine lode gone down in the bottom of the level, which is very encouraging for deeper levels. To stope No. 1 stope in the 130 west, by four men, at 3*l.* 12*s.* 6*d.* per fathom; worth 2 tons silver-lead ore per fathom. To stope No 2 stope, by four men, at 3*l.* 12*s.* 6*d.* per fathom; worth 1½ ton silver-lead ore per fathom. To stope No. 1 stope, in the 120 east, by four men, at 3*l.* 12*s.* 6*d.* per fathom; worth 1¼ ton silver-lead ore per fathom. To stope No. 2 stope in the 110 west, by four men, at 3*l.* 15*s.* per fathom, worth 1¼ ton of silver-lead ore per fathom. The filling of the skips at 7*s.* 9*d.* per 100 skips; the landing of the skips at 5*s.* 8*d.* per 100 skips. The weather is still dry, and water very scarce. The engine is doing the pumping very well. We are engaged now painting the pumping-wheel, as instructed by Mr. Bush when he was at the mine. We are making all the push we can in drawing and dressing with the limited supply of water at command.

SOUTH DEVON UNITED.—W. Hooper, June 26: The lode in Martin's shaft sinking below the 120 fm. level is without any particular change, either in size or character, since last reported on; worth 23*l.* per fathom. In the 120 fm. level, west of Martin's shaft, the ground is composed of more spar than usual, doubtless as we get away from the crossing the lode will again be found productive; driven during the past week 4 ft. 6 in. The lode in the winze sinking below the adit level west of Old Sump shaft contains gossan, fluor-spar, with stones of both mundic and copper ore, and is of itself very promising.

SOUTH FRANCES.—Chas. Craze, John Opie, Richard Williams, June 24: The lode in Pascoe's shaft is worth 40*l.* per fathom, and sinking with fair speed. The 336, east of Pascoe's, is looking rather better, now worth 15*l.* per fathom. The 336 west is worth 22*l.* per fm, and there is more lode standing both north and south of end. Stope in back of this level, east and west of winze, is worth 2½ per fathom. The 226, east of Pascoe's, is in a fine looking lode, and has again improved in value, now worth 14*l.* per fathom; width of lode here not known. No. 1 stope in back of the 226 west is worth 24*l.*, No. 2 stope 23*l.*, and No. 3 stope 25*l.* per fathom. A stope in the bottom of this level is worth 16*l.* per fathom. A stope in back of the 215 west is worth 20*l.* per fathom for width of lode, 12 ft. The 205 west looks more kindly, and is worth 8*l.* per fathom. The rise in the back of the 185 east is worth 20*l.* per fathom for length, 12 ft. No. 1 stope in the back of the 185 west is worth 18*l.* per fathom, and No. 2 stope is worth 20*l.* per fathom for width of the lode, 10 ft. We are pushing on the cutting down of Marriott's shaft as fast as possible, but the ground is very hard and spare. The sinking of Daubuz shaft under the 58 has been resumed, and we hope to continue with good speed. The 58, west of this shaft, is in a kindly lode, and producing saving work for tin. We are producing about our usual quantity of tin, and mine looking well.

SOUTH PENSTRUTHAL.—S. Davey, June 24: I hope to have the flat-rod shaft down in a few days, and start the cross-cut to lode.

STANDARD LEAD.—W. H. Borlase, June 26: No. 1 East and West Lode: The lode in the 45 forebreast is of much the same character as when reported on last week; if any change, I think the lead is coming stronger. No. 1 stope, in the back of this level, is producing fully 2 tons per fathom.—North and South Lode: No. 1 stope, in the back of the 33, is producing 30 cwts. of lead per fathom. I have started a winze in the bottom of the 33, which, I am pleased to say, is opening up a good lode, worth for lead 2 tons per fathom. This winze is in advance of the 33 forebreast about 16 fms.; and should the lode hold good in going down, and it shows every indication of doing so now, the prospects of the 33 are most encouraging. The lode in the 33 end is showing some good spots of lead, but is disordered by a floor dropping from the hanging side. Thinking there is more lode standing inside of the floor or head, I have just put a man to open out that side of the level, and shall be able to say more about it in a day or two.

No. 3 East and West Lode: On this lode little, if anything, was done during the late company's time, the ancients drove two adit cross-cuts and cut the lode, from which I am informed they raised a deal of lead. I have cleared the eastern or No. 1 cross-cut, and and also a winze sunk below, and find the lode, or lodes (for I think the east and west lode is in conjunction with a counter lode), is large and masterly, and have cut into the south side of the old workings, which have opened out a beautiful lode of blende, worth fully 2 tons per fathom, and also producing good saving work for lead. This point being only about 5 fms. from surface must be considered an important and a new feature in the mine, which will enhance the value of the property considerably. There is also a winze sunk below No. 2 cross-cut, which I shall clear up as soon as convenient, as I am told that is the best point. A manual pump would facilitate this work, and would be very useful in the mine.

TREGONTREES AND OLD POLGOOTH CONSOLS.—S. Pascoe, June 23: I am pleased to say that during the past week a change for the better has taken place at Tregontrees new shaft; we are probably on the course of the north lode which we have in the long cross-cut. It has been somewhat doubtful whether these lodes did continue in depth, but now it is beyond doubt that they do exist. This lode is letting out double the quantity of water it has hitherto, but cannot fully define its size and character as we are not yet through it. We shall likely have to drive about 2 fms. to intersect the south lode, which is the most important of the two. I hope ere another fortnight close we shall accomplish this end, and have to report a valuable discovery. The Mulvra new shaft is being sunk with all possible speed, the stratum is good, and I can now dispense with timbering.

TREVAUNANCE.—Wm. Vivian, June 26: In the 50 driving east the lode is worth 15*l.* per fathom for copper ore. We have cleared an old shaft, which is 30 fms. deep. This shaft is in a good position for an engine-shaft. I now purpose to sink this shaft by nine men; it will intersect the lode about 25 fms. below the adit level.

WEARDALE.—James Blenkiron, June 20: Grove Rake: In middle drift, east from Hill's rise, the vein is looking more kindly. The middle drift, east from Lonsdale's rise, has improved, worth 12 cwts. of ore per fm. The tribute pitches are without change, upon the whole looking a little more favourable; stopes worth from 12 to 35 cwts. of ore per fathom. The opening and repairing of the water level and coal sill drift down Whimsey shaft is progressing fairly.—Bolt's Burn: In the coal sill drift east the end is a little harder to drive, worth for ore 2½ tons per fathom. The new rise from same towards little limestone has commenced to look favourable, worth 20 cwts. of ore per fathom.—Eastgate Valley, Brandon Walls: We have not get to the end of the old works yet in Nattrass Gill drift. In Slatey Hazel drift the leads look more like uniting, worth 25 cwts. per fathom. I think the prospects good in the westward part of this mine, and have no doubt but that we shall meet with rich deposits when the ground is fairly opened. The pumping machinery is working better. We have arranged to put in new working barrel in place of present one.

Greenlaws: The tribute pitches are without change. Lee's stope is worth 40 cwts. per fathom. The stopes are ranging from 12 to 40 cwts. per fathom.—Killhope: The Trent level in Killhope Head vein is now made good to the sump. We have set the men to stope ore up to the quarter end on tribute, when we purpose to arrange for sinking. Hodgson's shaft, we expect, will be haled shortly; the water is now going away to rise below.—Old Moss, East Level: The end is looking more promising, a feeder, or branch, having come in from the north side and improved the vein. Middle Groove cross cut continues compact and hard in grey beds. The tribute pitches in Killhope Head vein and flats retain their value.—Burtree Pasture: In Donaldson's level the end continues to improve; vein 5 ft. wide, composed of fine fluor-spar, worth 32 cwts. of ore per fathom, and ground very firm. In Nattrass Gill drift the vein is split into two branches, with 3 ft. of stone between; quick, but not sufficient ore to value. In Waugh's rise, up to grey beds under Quarry Hazel, we are expecting to meet with ore as soon as high cheek of vein is reached, which will be in a few days.

WEST CARADON.—N. Richards, June 25: Gilpin's lode in the 38 west of main cross-course is without change to notice, at times producing stones of copper ore. The rise and stopes on this lode in the back of the adit level will yield together from 3 to 3½ tons of copper ore per fathom. A stope in the bottom of this level will yield 1 ton of ore per fathom. We intend shortly to commence costeaning the western part of this sett, with the view of discovering the No. 5 lode, which must be traversing this ground from New West Caradon, and shall get the ground dialled for that purpose as early as possible.

WEST CREBOR.—J. Andrews, June 25: We continue to make fair progress in sinking the engine-shaft below the 80, which is now down 12½ fms. below the level, and at the present rate of sinking we shall be deep enough for a 95 fm. level in a month from this time. There is no change in the lode since reported on last week, nor is there any change in the 80 west, as we are still driving by the side of the lode.

WEST GODOLPHIN.—T. Hodge, F. Hodge, June 25: We have about 2 ft. more to sink in the engine-shaft to be down 13 fms. The 70 east on Bellingham's is carrying (in a branch 1 ft. wide) some good tinstuff; the lode is today letting out a large quantity of water, indicating nearing a cross-course. In the 50 west on Pink's we are passing a hard bar of ground. West of the crossing we have passed, disordering the lode, and poor; but to-day the farthest point cut into is showing a change of ground, and congenial for tin; in a few days we hope to find a paying lode. The lode in the 40 west driving towards the rise has improved, and opening out paying ground. There is no other change.

WEST KITTY.—Wm. Vivian, June 28: In the 84, driving east of cross-cut, the lode is worth 10*l.* per fm. In the 80, driving east, the lode is worth 9*l.* per fathom. In the 72, driving east, the lode is worth 20*l.* per fm. In the 60, driving east of rise, the lode is worth 15*l.* per fm. In the rise in back of the 60 the lode is worth 9*l.* per fm. In the 60, driving east of cross-cut, the lode is worth 25*l.* per fm. In the 60, driving west of cross-cut, the lode is worth 8*l.* per fm. In the 50, driving east of No. 1 rise, the lode is worth 15*l.* per fm. Driving east of No. 2 rise the lode is worth 10*l.* per fm. In the stopes in bottom of the 72 the lode is worth 25*l.* per fm. In the stopes in back of the 72 the lode is worth 20*l.* per fm. In No. 2 stopes, in back of the 72, the lode is worth 50*l.* per fm. In the stones in back of the 60 the lode is worth 50*l.* per fm.

WEST PATELEY BRIDGE.—David Williams, June 27: East Grassington engine-shaft is in regular course of sinking by a full complement of hands, and excellent progress is being made. We have commenced carting a parcel of lead ore to the smelt-mill, and all is going well.

WEST PHŒNIX.—W. Rich, R. Giuyas, June 24: Good progress is being made in sinking Norris's engine-shaft below the 52; there are branches of chlorite and quartz in the bottom which will soon drop into the lode, and we hope improve it. The ground is a little harder for driving in the 52 end west, but the lode maintains its size and kindly appearance.

WEST POLBREEN.—Wm. Vivian, June 28: The engine-shaft is about 5 fms. below the 20. The water has increased, so that I have been obliged to suspend sinking for the time. The 40, driving west, is about 20 fms. distant from the engine-shaft; lode very kindly, and producing rich stones of tin. I am hoping when this end gets under it will unwater the shaft. The sinking can then be prosecuted with more speed, and to far greater advantage.

WEST WHEAL PEEVOR.—W. T. White, June 25: The lode in the 60, west of cross-course, is improving, now producing some good stones of tin, being very near the junction of both parts of the lode a still further improvement may be expected. We have no other change to report, all the bargains being vigorously pushed forward.

WHEAL BASSET.—W. C. Trevena, June 23: Setting Report: Lyle's engine-shaft to sink below the 180 fm. level, by 12 men, at 55*l.* per fathom. The 180 is being driven west of shaft, by six men, at 12*l.* per fathom; this end is still in the influence of the cross-course, and unproductive. A stope in the back is working by six men, at 3*l.* per fathom, where the lode is worth for tin 12*l.* per fathom. The cross-cut driving south at this level (180) to intersect the North Basset lode is in the granite, and driving by four men, at 8*l.* per fathom. The lode in the 170, west of cross-cut, is worth for tin 8*l.* per fathom, and driving by four men, at 9*l.* 10s. per fathom. A stope behind the end is worth for tin 12*l.* per fathom, and stoping, by six men, at 4*l.* per fathom. A cross-cut is driving north, by two men, at 6*l.* per fathom, to reach the north wall of the lode. The 160 is being driven west of cross-cut, by six men, at 6*l.* per fathom, where the lode is worth for tin 8*l.* per fathom, and looking promising for further improvement. A stope in the back is worth for tin 12*l.* per fathom, and stoping, by six men, at 5s. per ton of stuff. The winze sinking below the 150, west of cross-cut, by six men, at 7*l.* per fm., is worth for tin 12*l.* per fm. A stope working at this level, by six men, at 5s. 6d. per ton, is worth for tin 10*l.* per fm. Winze sinking below 137, west of cross-cut, by six men, at 8*l.* per fm.; worth for tin 8*l.* per fm. There are two stopes working in this level, by eight men, at 5s. 3d. per ton of stuff, where the lode is worth for tin 10*l.* per fathom. The 112 is driving west of cross-cut, by six men, at 6*l.* 10s. per fathom, and worth for tin 8*l.* per fm.; the ground in this end has greatly eased during the past week, which leads us to think we are approaching the cross-course. There are five stopes working in this level (112), by 26 men, at 5s. 6d. per ton of stuff, where the lode is worth on an average 10*l.* per fathom. In our tribute department we have 16 pitches, working by 38 men, on tributes varying from 10s. 6d. to 13s. 4d. in 1*l.*, on a standard of 45*l.* per ton for tin.

WHEAL CASTLE.—John Boyns, June 21: The shaft in the valley is cleared up to bottom, which is 11 fms. deep from surface. We found the old men's tools in the bottom of the shaft which proves they were trying to sink the shaft and were stopped by the water. We also found their ancient pitwork, a hose made of leather with iron rings to keep it abroad, also a clack-door piece and working barrel made of wood, which goes to say this place was worked before cast-iron pitwork was introduced here. The lode is worked from the surface down to within 14 ft. of the bottom of the shaft. We have not broke enough of the lode to tell its real value. From the samples we have taken it is about 45 lbs. of black tin per ton of stuff, which will pay to work at a profit when opened up and in working order. The lode is not expensive for breaking, and no doubt will improve as we go deeper. The 80 south is being driven by four men and boy. The 35 north, by two men, and the cross-cut south towards Forman's lode, by six men. In each of these points the lode and ground are much the same as last reported.

WHEAL CREBOR.—H. Phillips, P. D. Holman, June 24: The lode in the new shaft, sinking below the 144, contains mundic and spar, intermixed with copper ore; there is a strong and masterly lode going down in the bottom of this level west of shaft. The lode in the 144, driving east of new shaft, is composed of capel and spar, intermixed with copper ore. The lode at this level west will yield 10 tons of ore and 4 tons of mundic per fathom. The stope in the back will yield 8 tons of ore and 4 tons of mundic per fathom. The stope in the winze sunk below the 132, east of new shaft, will yield 3 tons of ore per fathom The lode in the 132, driving east, will yield 1 ton of ore per fathom. The stope in back of this level will yield 3 tons of ore and 2 tons of mundic per fm The lode in the winze sinking below the 48 will yield 4 tons of ore and 3 tons of mundic per fathom. The stope in back of this level will yield 4 tons of ore and 4 tons of mundic per fathom. There is nothing to call for any special remark in any other part of the mine since last reported.

WHEAL GRENVILLE.—T. Hodge, June 24: The rise in the back of the 205 east is worth 9*l.* per fathom. The 190 east end is worth 8*l.* per fathom. The 178 east end is worth 9*l.* per fathom. The 165 east end produces stamping work. The 150 east the part we are carrying is not looking quite as well for tin. The end is going forward with fair speed. The 140 west end is worth 10*l.* per fm. No other change. All surface work is being pushed on. The masons are making good progress in building the engine-house.

WHEAL UNY.—W. Hambly, June 26: Good progress is being made in sinking Hind's engine-shaft below the 203 fm. level; the make and yield of the lode is much the same as last reported. The ground in the 203 west is getting easier for driving, and the lode in the end has a very promising appearance, producing a little tin, but not to value. The 193 west is worth 5*l.* per fathom. The stope on the copper part of the lode in the back of this level is looking remarkably well, and worth 12*l.* per fathom for copper. The 182 west is worth 10*l.* per fathom. There is no particular change to notice in any of the other points in operation. The machinery at surface and underground is in good order and working well.

YORKSHIRE LEAD.—W. H. Hosking: In my last letter to you I stated that we had completed the clearing of the water level, and had communicated it to our engine-shaft, which we had sunk 40 fathoms deep to meet it. Since then we have been engaged sinking the shaft below the level, and it affords me much pleasure to be now able to report to you that we have got down to the bottom of the old men's workings, which we find they carried 5 ft. below the water level, and that we here find the lode presenting a very satisfactory appearance, being 2¼ ft. wide, carrying lead throughout, 6 in. of which forms a leader of solid lead. This is but one of the six lodes that are here within a distance of only 30 fathoms, and as this one was always by the old miners designated the "string," we may fairly reckon on a still richer rate of production from the others when intersected. As the lode which we have just opened is fully in our shaft we shall be sinking on its course, and shall be raising lead therefrom as we sink, and this operation we shall push on as rapidly as possible, with the view also of cross-cutting the other five lodes as soon as we get our shaft 10 fathoms deeper.

KILLIFRETH.—At the meeting on Tuesday the accounts showed a loss on the 16 weeks' working of 950*l.*, increasing the debit balance to 1541*l.* A call of 5s. per share was made.

FOREIGN MINES.

ALAMILLOS.—June 18: In the 20, driving west of San Martin's shaft, the lode is small and the granite hard. The lode in the 20, driving west of San Agneda shaft, has improved in value to ½ ton per fm. In the 50, driving west of San Felipe's shaft, the lode is without lead. In the 85, driving east of San Enrique's shaft, the rock is more favourable for working. The 130, driving east of Taylor's engine-shaft, continues unproductive. In the same level, driving west of Taylor's engine-shaft, the lode is without lead. The lode in the 115, driving west of Taylor's engine-shaft, is large, but of no value. In the 80, driving east of San Victor shaft, there is a strong and promising lode, producing 1 ton per fm. The lode in the 70, driving west of Judd's shaft, is valued at ½ ton per fathom. In San Victor's engine-shaft, sinking below the 80, the men are fixing penthouse and cistern, and doing other necessary work. The lode in Roda's winze, sinking below the 60, is worth 1½ ton per fm.; good progress is being made with this sink. Antero's winze, sinking below the 50, is going down through good stoping ground, valued at 1 ton per fm. In Pulido's winze, sinking below the 50, the lode is well defined, and produces 1 ton of ore per fm. In Blane's winze, sinking below the 70, there is a large lode spotted with lead, worth ½ ton per fm.

ALMADA AND TIRITO CONSOLIDATED SILVER.—R. Harris, May 24: Mina Grande Hundred Lode: The 24 fm. level driving north yields 8 American tons per lineal fathom; the 12 fm. level yields 19 American tons per lineal fathom; the western branch tunnel level yields 10 American tons per lineal fathom.—W. A. Clemes' Assay Report: Battery samples, May 20, 29·3 ozs. per 26·3 ozs. per American ton; May 22, battery samples, 26·3 ozs. per American ton; May 23, 26·3 ozs. per American ton; May 24. 30·3 ozs. per American ton.

ANTIOQUIA.—Profit and loss for the month of April:—338 tons of mineral and attle crushed produced 112 ozs. of gold; average 6 10 ozs. Estimated value, including exchange, 343*l.* 2s.; cost at the mines at Medellin and in London, 341*l.* 3s. 2d.; estimated profit, 1*l.* 18s. 10d. In addition to the cost of 341*l.* 3s. 2d. the sum of 344*l.* 12s. has been spent on capital account.

BIRDSEYE CREEK GOLD.—Telegram, J. S. Goodwin: I have turned off water.

CHILE GOLD.—Telegram from Manager, June 24: Production for May, 2150 ozs., 26 days' work, with 50 stamps. Stock on hand June 1, 864 ozs. This is a considerable improvement upon the production of the previous month, and indicates that the quartz is becoming richer.

COLOMBIAN HYDRAULIC.—W. S. Welton, May 19: Run No. 103: We cleaned up the upper portion of the sluice and part of the lower sluice on the 16th and 17th inst., having run 356½ hours, and obtained gold valued at $3625·075, the total expenses at the mine during the same period, less premium on Exchange, being $2107·40, leaving a profit of $1515·67—equal to 305*l.* 2s. 6d. The board will note that, but for the time lost in repairing damages to the ditches and pipe, 162 hours being lost on the former and 78 on the latter, the amount of returns I anticipated in my last might have been obtained. The gravel continues the same as reported in my last letter.—Lower Cantadera Ditch: On the 16th inst. two slides took place in the upper level and one in the lower level, so that no water can be brought in by this ditch. Two timbermen have been engaged to retimber these levels, but this work will probably take a month to do.

DENVER GOLD.—Frank S. Craven, June 7: The 800 West North Vein: The drift is in 351 ft. east from cross-cut; carries over 3 ft. of crevice matter, which is mostly low-grade mill ore. The stopes have not changed materially; 82 tons of mill ore last week yielded 39½ ozs. of gold; 3 tons of smelting ore sold for $120.—The 900 West North Vein: The west drift from the cross-cut is in 134 ft., and is hard and poor. The east drift is in 84 ft., and carries 15 in. in mill ore. The stopes over this drift show from 2 to 3 ft. of mill ore for a height of 21 ft. The east stope from the winze carries 2 ft. of low-grade tore in the bottom; 36 tons of mill ore last week yielded 16 ozs. of gold.—The 900 West Main Vein: Pay along the junction has deserted us, and work there is stopped; 7 tons of mill ore yielded 2½ ozs. of gold. We have not yet made connection with the rise and winze.—The 1300 West Main Vein: The drift is in 435 ft. from the shaft; it and four stopes (12 ft. high each) carry 1 ft. of pay on an average; 43 tons of mill ore yielded last week 26½ ozs. of gold; 6½ tons of smelting ore sold for $458·72 in Denver. The total milling last week (six days) amounted to 168 tons of ore and 84 ozs. of gold, or just ½ oz. per ton. Smelting ore sales amounted to 18,289 lbs., at $63·29 per ton = $578·72. Returns on a considerable amount of May smelting ore are not yet in.

DEVALA MOYAR GOLD.—Manager, May 30: Salomon's Reef: We are doing all we can to get the winze and lower tunnel connected before the monsoon sets in. They are now about 38 or 40 ft. apart, but I think that we shall connect them in three weeks, and then if there should be a rush of water down the winze it will not delay us. The winze is down 163 ft., and the lower tunnel is in 282 ft. In consequence of the labour being chiefly devoted to these two works the 60 and 140 ft. levels have only been driven about 3 ft. each for the week. We are just carting down another prospect from the 60 ft. level, and it will be put through the mill next week. The tunnel to strike Harewood reef is now within 21 ft. of the line of reef, and it is 239 ft. in length.

FORTUNA.—June 18: Canada Incosa: The lode in the 70 driving west of San Pedro shaft is small, and contains a few spots of ore only. The 90 driving in the same direction has improved to 1 ton per fathom, and the ground is easier for opening up. The 120 driving east of O'Shea's engine-shaft is being extended at a rapid rate. In the 100 driving east of Lownde's shaft the lode yields good stones of ore, and shows signs of further improvement. The lode in Lownde's shaft sinking below the 100 having changed its underlie the principal part of it is standing in the south side. In Osman's winze sinking below the 90 the lode has fallen off a little in value to ½ ton per fathom.—Los Salidos Mine: The lode in the 175 driving west of Taylors' engine-shaft continues small and unproductive. In the 165 driving east of Taylo'rs engine-shaft the lode is disarranged, and at present not carrying enough ore to value. The lode in the 145 driving east of Taylor's engine-shaft has very much improved, and is opening up valuable ore ground worth 3 tons per fathom. In the 130 driving east of Taylor's engine-shaft the lode is compact, but rather small at present, producing ¾ ton per fathom. The men are making good progress in San Miguel's sinking below the 120. Digma's winze is being sunk at a good rate below the 160, but the lode has declined in value to ¼ ton per fathom. The weekly weighings of ore were kept up very regularly in the past month, during which there was no important alteration in the productiveness of the stopes. The works at surface are going on steadily and the machinery is in good working condition. We estimate the raisings for June at 300 tons. The tributers returned 148½ tons of ore in the past month.—San Anton Mine: The lode in 65 driving east of Henty's engine-shaft is wide and strong, yielding large lumps of ore worth 1 ton per fathom. In the 55 driving west of Henty's engine-shaft a good length of valuable lode was opened up in the past month, valued at 2 tons per fathom. The lode in the 45 driving in the same direction is disarranged and unproductive, and the driving suspended for the present. In the 30 driving east of El Tesoro engine shaft there is a strong and well defined lode, but it is not yielding enough ore to value. In the 30 driving west of El Tesoro engine-shaft the men are cross-cutting in a northerly direction towards the main part of the lode. Cefre's winze sinking below the 30 is holed to the 45. The usual quantity of mineral was delivered at the Fortuna smelting works in the past month, and the stopes are yielding moderately at present. The surface works are kept on steadily, and the machinery including the new line of horizontally rods, which gives great satisfaction is in good condition. We estimate the raisings for June at 75 tons. The tributers returned 10 tons of ore in the past month.

FRONTINO AND BOLIVIA.—The following is the statement of profit and loss account for the month ending April:—2392 tons (of 20 cwts.) from general mines produced (average 14 dwts. per ton), 1690 ozs.; gold bought, 133 ozs.: total, 1823 ozs. Estimated value of the gold, including exchange, 491*l.* 13s. Cost at mines at Medellin and in London, 469*l.* 0s 5d.; monthly allowance for freight, commission on gold sales, and sundry fluctuating outlays not immediately ascertainable (estimated at), 25*l.*; paid for gold bought of tributers, 237*l.* 8s.=517*l.* 8s. 5d. Estimated loss, 26*l.* 15s. 5d. The manager reports that there has been a steady increase in the supply of water to the mills, and he expects next month will show a more satisfactory result.

HOOVER HILL.—Report for May: The Gallimore shaft is down 59 ft. below the 170—an advance of 12 ft. for the month. The vein in the bottom is somewhat smaller, but continues to look well. The work of cutting down the old Brioi's shaft below the 70 is being proceeded with; a little ore left by the old workers is being got, but it is of low grade.—Hawkin's Mine: In the No. 1 stope (Tunnel) the ore body is being followed, and a considerable amount of low-grade ore is being extracted. In the prospecting drift west from the bottom of the Hawkins' shaft (135 ft.) a few stringers of ore have been met with.—Mill: 583 tons of ore were crushed during May, yielding 140 ozs. 3 dwts. of gold.—P.S.: The secretary states that the bar has been received at the company's offices.

KAPANGA GOLD.—Telegram, Capt. Argall: 10 tons of quartz has yielded 25 ozs. of gold Scotty's improved.

LAKE SUPERIOR NATIVE COPPER.—Capt. Williams, June 7: No. 2 shaft sunk 3 ft.; lode here has very much improved, 4 ft. wide, yielding good mill rock. No. 3 level, south from above shaft, driven 15 feet; lode a little harder, looking very promising. Rise in back of No. 2 level south, driven 11 ft.; this has been put up to ventilate and re-open stope ground, producing a little copper. Cross-cut east of No. 1 level south, driven 6 ft.; the ground is changing, showing we are nearing the east part of lode. Winze No. 5 in bottom of No. 3 level, driven 1 ft. 6 in.; lode 5 ft. wide, in good mill rock, carying good heavy copper.

LINARES.—June 18: The lode in the 135 driving east of Warne's cross-cut is very open, containing a little ore, but not sufficient to value. The 130 driving west of Warne's shaft is opening up a splendid piece of ore ground worth 3 tons per fathom. There is no improvement in the 135 driving west of Peill's engine-shaft. In the same level driving east of Peill's engine-shaft the lode is small, being valued at ½ ton per fathom; ground hard. The 120 driving east of Peill's engine-shaft is opening up a good length of stoping ground worth 2 tons per fathom. In the 105 driving east of San Francisco shaft the lode is small and unproductive. The sinking of Peill's engine-shaft below the 135 is progressing slowly at present. No. 252 winze sinking below the 65 will reach the required depth for the 75 in a few days; the lode is worth 2 tons per fathom. In No. 254 winze going down below the 100 the lode is moderately easy for sinking through, but it does not contain any ore.—Quinientos Mine: The lode in the 115 driving west of Taylor's engine-shaft is very large, containing a little ore, but nothing of any actual value. In the same level driving east of Taylor's engine-shaft the lode yields good stones of ore worth ½ ton per fathom, and the ground is easy for driving through. The lode in the 100 driving east of Taylor's engine-shaft has fallen off in value to 1 ton per fathom during the past fortnight. In the 90 driving east of Taylor's engine-shaft, there is a regular and well-defined lode consisting of carbonate of lime and lead ore, valued at 1 ton per fathom. In the 63 driving east of Judd's shaft the lode produces 1 ton per fathom. The lode in Roque's winze sinking below the 100 is of a promising appearance, and worth 1 ton per fathom; ground easy for sinking through.

NEW POTOSI.—Manager, May 24: Attwood's shaft No. 1 drift west has been driven only 7 ft. during the month, as we are opening up richer quartz below. Total distance west from shaft, 128 ft. No. 2 drift has been driven 42 ft. Since the 19th we have found the quartz very much better, and the last 4 ft. have been driven through splendid quartz. It seems to be holding down well, but until we have developed it more I must reserve a more positive definite statement as to its value. Total distance west from shaft, 147 ft. The No. 3 drift is improving, and I hope by the next monthly report to be enabled to report good quartz here. It has been driven 36 ft., and is now 42 ft. west from shaft. Average width of vein in No. 3 drift is 3 ft.—Peru Shaft: We have recommenced driving east. There is no change in the vein worthy of notice. In Scriven's shaft the winze below No. 1 has been communicated, and we are stoping quartz from the sides. The present end of the No. 2 drift is 69 ft. from the cross-cut, the vein 3 ft. in width, and looking well. There is a large amount of available stoping ground here, but the hoisting must be accelerated; this will be done after Attwood's shaft is completed. In conclusion, I have only to say that the mine is looking better than ever I saw it. The improvements have been more marked within these last six days, and being in virgin ground I must entreat you not to expect a more positive statement as to value until I can further develope the richer points, which is being done with all energy.

MYSORE GOLD.—B. D. Plummer, May 31: Mining Operations: During the time we have been employed putting in roads, &c., and completing the new steam hauling-machine we have not been able to wind any ore from underground, and there have not been any assays made this week; however, this machine is now completed, and I hope we shall be able to make short work in cleaning out the mine. The lode in the engine-shaft is 2½ ft. wide; the last assay value was ascertained on the 17th inst., and it gave a produce of 1 oz. 15 dwts. 16 grs. per ton of stone. There is no reason why it is not equally rich at this time; in that case it will be valuable, as at present the shaft will yield 15 tons for every 6 ft. in depth. The lode is compact quartz, and the casing walls are hard trap.—Stamping: This work progresses very satisfactorily.

OURO PRETO.—Superintendent, May 12: Raposos Mine: Since April 1 the shallow adit advanced 16 ft. Apolinaris rise 8 ft., Catiet 6 ft., Antimony 9 ft., and the Chaplo do Sol adit 11 ft. The ore supply has been sufficient to run the stamps constantly Repucha or Borges Mine: Work is continued in the Mina d'Corega adit, and on the surface in various places. The mill has been run but a few days. The connection with the Mina d' Agua shaft is daily expected. After opening this connection work in both adits will progress rapidly. Houses for the mine captain and some workmen are being put up. Now that the water can all be taken out through the main shaft, the lode can be opened rapidly, and all the lodestuff will be sent to the mill. All the timber, tiles, plank, &c., required is being delivered, and we shall be well prepared for the next rainy season.

PIERREFITTE.—Manager, June 23: The No 1 stope below the No. 1 level is the same as usual. The stope in the back of the middle level, north-west of the slide, is worth 2½ tons of silver-lead ore per fathom. The end is now worth 2 tons of lead per fathom; the ground there is still very hard. We are also stoping in the bottom of this level, and at present the lode yields about 1 ton of lead per fathom. The level the other side of the slide—south-east middle level—is being driven with good speed, and the lode in the end is worth 1¼ ton of lead per fathom. The stopes this side of the slide are not quite so good as they were. I am pleased to tell you that at last we have reached a good part of the lode in the No. 2 level south-east, where we have been cross-cutting for a long time. In the part furthest advanced we have splendid rough grain silver-lead, which is worth at least 3 tons to the fathom. We have met with this only within the last few days. We have what appears to be the lode on the north-west side of the slide in this No. 2 level, but the men have not yet been able to open out enough for us to say its value.

RARA FORTUNA SILVER.—J. A. Oulton, May 24: About ten days since we discovered a branch of blende on the south of third Febrera, which is paying at present about two tons per fathom, consequently will have raised and have ready to forward by the 30th of present month 20 tons of ore, mostly blende the same being the result of 30 days' work, 12 tons of which have been forwarded, 6 tons more will leave on the 30th, and the remainder will leave about June 12, together with the quantity raised up to that date. The No. 2 level south paving 800 lbs. per fathom, mostly lead; north end No 2 level very poor. A very rich mine has been discovered about 1¼ mile from here. I have had samples which assay as high as 5409 ozs. 6 dwts. 8 grs. of silver per ton. I will forward you a sample of the ore through Mr. Glover on June 1. Gassmann owns half of the mine, they have about 2 tons of ore above ground. I am doing some prospecting on the same lode, and if I find anything good will take up some ground for the company, but will not spend any money without your orders, unless I find it as rich as the mine now being worked.

RICHMOND CONSOLIDATED.—Telegram, June 24: Week's run (one furnace) $25,000 from 390 tons of ore; refinery $30,000. The board have received intimation that No. 1 furnace has been started to clear up prior to shutting down the furnaces temporarily, which it is expected may be done some time in July.

RUBY AND DUNDERBERG CONSOLIDATED.—June 1: Dunderberg: There are 24 tributers at work. No change since last report. Have shipped 39 tons tribute ore during the week.—Home Ticket: The winze below the fourth level continues in low grade ore and iron; progress this week, 4 ft.; total, 34 ft. below the fourth level. The tributers between first and second levels are extracting some fair grade ore. Have shipped 16 tons of quartz ore from the upper workings, and have four tributers and four contractors at work.—Lord Byron: The drift to connect with the cave has been advanced 6 ft. during the week; total, 40 ft. from the main tunnel. We expect to connect with cave in the next day or two. The orebody 40 ft. above the tunnel level continues from 2 to 4 ft. wide, and about 8 ft. in length. There are three tributers and two contractors at work. Have shipped 75 tons tribute ore during the week.

— Telegram, June 24: 24 tons tribute ore shipped, and 22 tons tribute ore smelted, producing to company $254.

TOCOPILLA.—James Gill, April 20: Carmelita Mine: The rise in the back of the No. 12 level, east of skip-shaft, is now communicated with the winze sinking below the No. 11 level, west of Jose's shaft, and the connection between the two shafts has given excellent ventilation throughout the mine. The appearance of the lode in the bottom of Jose's shaft sinking below the No. 11 level is a little more favourable, it being now from 15 to 20 in. wide, and producing at times good stones of copper ore. The shaft is now down 20 metres below the No. 11 level, and we are at present sinking a "fork," which we hope will be completed in a fortnight's time, when we shall be able to put in a double skip-road, and cut the plates for the No. 12 level. In the past month No. 11 level east of Jose's shaft, has made a very favourable change. The ground is now much softer, and very similar to the ore-bearing ground in the No 10 level. The lode is 18 in. wide, and produced in the month's driving 935 quintals of copper ore, worth 15 per cent.; it is at present a little diminished in value, but we think the falling-off to be temporary. The lode in the bottom of No. 1 winze sinking below the No. 11 level, west of Jose's shaft, is narrow and unproductive. We have intersected a small vein containing strings of ore in the cross-cut, north of the No. 11 level, west of Jose's shaft, but up to the present we have not struck the north lode. The rock is now more favourable, and cheaper for driving. No. 1 winze sinking below the No. 11, west of Jose's is communicated with No. 12 level, east of skip-shaft. During the month No 10 level, east of Jose's, has been driven in a somewhat disordered and very changeable ground; it yielded 240 quintels of fair quality smelting ore, and the present appearance of the lode is very encouraging. The No. 2 winze sinking below the No. 10, east of Jose's shaft, is communicated with the level below. In sinking the lode much improved in value, it being worth ¾ ton of copper ore per metre. Good progress has been made in the driving of No. 10, west of Jose's shaft, and in the last 12 metres extended it yielded 346 quintals of copper ore worth 14 per cent. The lode in the present end presents good indications for improvement.

UNITED MEXICAN.—Mr. Hay, Guanaxuato, June 2: Mine of El Diamante: In the frente de Adela west the lode is getting much narrower, and produces little ore; 15 cargas were sent from this working to Duran last week. In the frente de Maria east the lode is only 35 centimetres broad, and but little ore is found. In the pozo de San Antemio the lode is narrower, and measures only 60 centimetres, but the ores goes on to the dip of the lode; last week we sent to Duran 13 cargas from this winze. In the cross cut to the alto in frente No. 2 of Santa Rosa west, which we began last week, we have traversed a narrow strip containing some ore. The ordinary ore remitted to Duran last week was 13 cargas, making the extraction for the week amount to 45 cargas of hacienda ore.—Mine of San Cayetano de la Ovejera: In the frente No. 3 of San Juan east the lode is only 1·30 metres broad, but the quality of the ore is improving. At the public sale on May 29 5½ cargas was sold for $468. Last week we resumed work in frente No. 3 of San Juan. We have not yet found any ore in frente No. 4 of San Juan west. In the frente No. 5 of San Juan west, the lode is 40 centimetres wide, and traces of silver begin to appear. In the frente No. 5 of San Juan east the lode is 1·50 wide, and the ore, though ramified, is of a good class. In the frente No. 5 of San Juan east (the continuation) the ore of a very good class is ramified over the lode, which has a breadth of 1·50 metres; from these two ends we sold in last Thursday's sale 15 cargas for $1660. In pozo No. 2 of San Juan at the top of this winze one of the crabs is placed. In frente No 10 of San Andres west the lode is 80 centimetres wide, all in fair ore. In the pozo No. 1 of San Andres the lode is 1 metre wide, all in fair ore, of which 2 cargas were sold last Thursday for $92. We did not work in pozo No. 2 of San Andres during the week ending 24 ult. In pozo No. 5 of San Andres the lode is 1 metre wide, all in good ore. Last public sale we sold 8 cargas for $578. In the pozo No. 6 of San Andres the lode has widened, but the ore is not so good as heretofore.—Adit: In the frente of San Martin there is no change in the appearance of this end. In last public sale held on May 29 we sold about 406 cargas for $10,525, and during the week ending May 31 we sent to Duran 392 cargas, and sold 5 cargas 1 arroba 2 lbs. of bonito, which makes a total extraction of 804 cargas from El Diamante. We have a total output from the new concern of 849 cargas. Returns from the Mine of San Cayetano de la Ovejera and El Diamante for the week ending May 31, 1884, $16,136; outlay, $4238.—Finance: My cash balance is $35,729, out of which I shall send bill next Monday for 5000*l.*, as previously advised.

VICTORIA GOLD.—J. C. Danby, May 20: We have cleaned up the plates after about 115 hours' intermittant run; the result is about 70 ozs. gold amalgam. I did this as Mr. Larchin wanted to return. The result I consider good, considering we have had to teach the men how to work the pneumatic stamps, the bad delivery of water, and the new copper plates absorbing such a lot of mercury, and consequently gold. The arrastres and tail sluices have not yet been cleaned up, and will probably yield a large increase. I hope to make considerably greater results by next mail. The directors must understand that in all new or other machinery erected, especially in a country like this, it requires time to get it in good running order. I have also put through a lot of poor stuff, so as to get the plates in good shape for amalgamation, the larger portion of the gold having been caught in the last two or three days' run.

FLAGSTAFF DISTRICT SILVER MINING COMPANY (in Liquidation).—In this matter Mr. Graham Hastings, Q.C., and Mr. Seward Brice, instructed by Messrs. Greenfield and Abbott, on behalf of the late secretary of the company, made an application, on Thursday, to make absolute an injunction (already granted *ex parte*) to restrain the directors from tampering with, altering, or parting with certain books and papers of the company, recently removed by them to the offices of Messrs. Lousada and Emanuel, their solicitors in the matter Mr. Justice Kay, after hearing Mr. Grosvenor Woods for the directors (on whose behalf it was explained that the books had been removed, in order to determine the tenancy of the offices, and avoid the payment of rent), expressed indignation at such conduct, and ordered the said books and papers to be deposited with the Court within 24 hours, and gave costs of application.

COPPER, TIN, AND LEAD.—Messrs. FRY, JAMES, and Co. (June 26) write:—Copper has continued heavy for all descriptions, and values have further declined some 10s. a ton during the last fortnight. Tin has been dealt in rather largely, but still the tendency of prices is downwards. Lead is difficult of sale, and prices are lower.

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The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JUNE 26, 1884.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde...	2 1 3-	- -
,, Scotch, all No. 1 ...	2 2 2-	—
Bars Welsh, f.o.b. Wales	4 17 6-	—
,, ,, in London.	5 7 6-	—
,, Stafford., ,,	6 7 6-	—
,, in Tyne or Tees ...	5 0 0-	—
,, Swedish, London...	9 0 0-	9 5 0
Rails, Welsh, at works ..	4 17 6-	—
Sheets, Staff., in London	7 5 0-	7 10 0
Plates, ship, in London .	7 10 0-	8 0 0
Hoops, Staff., ...	6 10 0-	—
Nail rods, Staff., in Lon.	6 7 6-	—
STEEL.		
English spring	12 0 0-18 0 0	
,, cast	30 0 0-45 0 0	
Swedish, keg	13 0 0-14 0 0	
,, fag. ham.	13 10 0-14 10 0	
Rails at works.....	4 12 6- 5 0 0	
,, Light, at works...	5 12 6- 6 12 6	
LEAD.		
English pig, common...	10 15 0-11 0 0	
,, ,, L.B.	11 0 0-11 5 0	
,, ,, W.B.	11 5 0-11 10 0	
,, sheet and bar..	11 17 6-12 0 0	
,, pipe	12 7 6- —	
,, red	14 7 6- —	
,, white	16 7 6-18 10 0	
,, patent shot ...	13 17 6-14 0 0	
S. ,,ubish.....	10 7 6- —	
NICKEL.		
Metal per cwt.	— - -	
Ore 10 per cent. per ton.	— - -	
SPELTER.		
Silesian, ordinary brands	14 7 6-14 12 6	
,, special brands.	14 12 6-14 17 6	
English Swansea	15 10 0- —	
Sheet zinc.....	18 0 0- —	

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	84 1 0- 85 0 0	
,, bars ,, ...	85 10 0- 86 0 0	
,, refined.....	86 10 0- 87 0 0	
Australian	81 17 6- 82 0 0	
Banca	nom. - - —	
Straits	81 17 6- 82 0 0	
COPPER.		
Tough cake and ingot.	59 0 0- 59 10 0	
Best selected	60 0 0- 60 10 0	
Sheets and sheathing.	63 0 0- 67 0 0	
Flat Bottoms	66 0 0- 70 0 0	
Wallaroo	nom. - —	
Burra, or P.C.C.....	61 0 0- —	
Other brands ... nom.	59 0 0- 60 0 0	
Chili bars, g.o.b.	53 17 6- 54 0 0	
QUICKSILVER.		
Flasks, 75 lbs., WAY.	5 5 0- —	
PHOSPHOR BRONZE.		
Alloys I. and II.	£112 0 0	
,, V.	118 0 0	
,, VI. and VII.	133 0 0	
,, XI., Duro A, Duro B...	110 0 0	
BRASS.		
Wire	6¼d.- —	
Tubes	6⅝ - —	
Sheets	7⅛- —	
Yel. met. sheath. & sheets	5⅛-5¾d.	
TIN-PLATES.*	per box	
Charcoal, 1st quality ..	1 1 0- 1 2 0	
,, 2nd quality ...	0 19 0- 1 0 0	
Coke, 1st quality	0 16 3- 0 16 6	
,, 2nd quality	0 15 6- 0 16 0	
Black..... per ton	15 10 0- —	
Canada, Staff. or Gla. at Liverpool	12 0 0- —	
Black Taggers, 450 of 14 × 10	30 0 0- —	

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—Our markets remain greatly depressed, both as regards prices and the amount of business being transacted. The uncertainty of the future is the chief cause of the existing despondency, and notwithstanding the present time may appear favourable for a revival, yet there is not sufficient confidence in the future to encourage even speculators to commence operating beyond the most narrow limits. It may be hard to ascribe any particular reason for this feeling of gloom, uncertainty, and despondency, trade having apparently become dull, crippled, and depressed from no very special cause; and, further, it is not in the bulk of the trade there is so much depreciation as in the profits that are secured. If we turn to deliveries we find in most instances they are well sustained, and yet there are many justifiable complaints of a scarcity of business. The one at first sight may appear to contradict the other, but it by no means does so. Although deliveries for the most part are well sustained, they in scarcely any instances show any increase; and when we remember that the business done has to be divided over so many more hands than formerly, it is easy to understand the numerous complaints of a limited business. Further, the growing increase in the population ought to cause at least a proportionate increase in all branches of commerce, metals included; but so far as metals are concerned there is not that increase, and consequently the trade is with reason pronounced bad. It is proved without doubt, not merely by the general complaining, nor by the limited time the various works are in occupation and other business establishments are employed, but also by the very low and unremunerative prices that have for so long been quoted, and which even now in some cases display an easy tendency.

Prolonged low prices are the strongest evidences of bad trade; when they are reduced temporarily it may arise merely from speculative causes, or the sudden arising of some adverse feature; but when they are persistently kept down it is evident that the trade is not good, nor business profitable. The absence of speculation in our markets is to be attributed, in addition to the slackness in general business, to the indecision of political affairs, to the unsettled state of the stock markets, and to the constant financial difficulties in America, as well as to one or two other minor matters which are just now bearing an adverse influence upon our markets. It is fortunate, however, that amongst the majority of traders there has not been any excessive speculation, and, therefore, the existing stagnation in trade may be met with little more than a keen pinch being felt all round; but the chief fear that is entertained is that if this state of things continues to exist how much longer will traders be enabled to hold out. A continuous living on capital must sooner or later come to an end; and, as there has been an absence of profits for so many months past, it is natural there should be good deal of nervousness and anxiety as regards the future. If, however, there is much that deadens the markets, and creates a gloomy feeling, there is likewise a good deal which should produce the opposite, and a beneficial effect. The very cheapness of prices reduces the risk of purchasing to a minimum; cheap money facilitates the financing of such purchases as well as stimulates enterprise. The agricultural prospects are promising; the traffic returns of most of the heavy lines show an improvement. Stocks of some metals are being reduced, and other favourable features which, when allowed to exercise their full influence, must bear a very satisfactory result upon the various markets.

COPPER.—This market remains very quiet, without feature, and in the absence of business prices tend in favour of buyers. There has, however, been no sudden drop or heavy fall effected in prices, but a steady gradual falling away, a crumbling tendency, and a constant depreciation. As prompts fall due some holders appear desirous to realise, and although the principal holders are tolerably strong in their quotations, yet the sales effected by the weaker holders has a very unsatisfactory effect upon the market. In manufactured there is very little business doing, and notwithstanding the very low prices, prices as low as they have ever been known before, there is no stimulus to the demand, and orders remain as scarce as they have done for a long time past. At the same time there is reason to look and hope for a better Indian demand shortly springing up, not only on account of the almost total cessation of orders from that country for some time past, indicating that stocks out there must have greatly diminished, but also owing to the reduced rate of discount of the Bank of Bombay.

The high rate of money in that market has, for a long while, crippled business; but now that it has been brought down to a normal figure, it is to be hoped that business may speedily be restored. Just lately there have been some rather better enquiries from some of the Indian markets, and, although they are mostly at too low limits to result in business just now, yet it is a good feature to find that enquiries are again being made, as it improves the prospect of a better export demand, and confirms the view that stocks in India must be diminishing. Smelters, for the most part, are thought to be badly off for orders, and are, therefore, slow to turn them away. It consequently seems a most favourable opportunity for buyers to purchase freely, and they would doubtless do well to avail themselves of the present opportunity.

IRON.—There is no improvement whatever to report in the manufactured branch of this trade, business all round remaining extremely slack. Manufacturers experience the greatest difficulty in keeping their mills going in anything like regular time; and in order to secure orders for sharp delivery they are not unwilling to make some further slight concessions, even on the present very reduced rates; but, at the same time, they are loth to take any reduction for forward deliveries. It is present work that they require; orders that will keep their mills and machinery in operation, and to attain this end they are not unwilling to submit to slight sacrifices; but to book orders for forward delivery at current rates they deem impolitic—first, because present rates are very unremunerative; and secondly, they are hopeful that the existing stagnation must be fast drawing to a close. At any rate, there is little chance of prices receding further to any material extent, even if the trade does not improve; while on the other hand, should any revival spring up there is plenty of room for an improvement in prices. This is a fact, which buyers would do well to notify, and instead of holding back their orders should fully secure their wants.

Prices have rarely been so low as they are now, and in some instances are unprecedentedly cheap, and while there is not much in existing events to justify any anticipations of a speedy recovery in the demand, yet there is nothing to show that prices are at all likely to further recede. The sellers' necessity is the buyers' opportunity, and now that it is so necessary for sellers to secure orders to keep their mills in operation, a golden opportunity is presented for buyers to purchase upon favourable terms, and it is for them to see that the opportunity does not pass away without them availing themselves of it. Already for pigs the Middlesborough market has become stronger, and this, if continued, may shortly bear some favourable influence over the whole market. The Glasgow warrant market was quiet on Monday, and the quotation was 41s. 6d. with an easy tendency, and on Tuesday there were numerous transactions between 41s. 4½d. and 41s. 5d., closing with buyers at the higher figure. On Wednesday there was a fair business done, and the market was steady but strong at 41s. 5d. to 41s. 5½d., but yesterday it was not quite so firm, transactions being recorded between 41s. 4d. and 41s. 3d, and the closing figure this afternoon is 41s. 3d. The shipments last week were 12,731 tons, against 14,347 tons for the same week last year, being a decrease of 1616 tons, and which makes the total shipments for the whole of this year 273,189 tons, against 301,473 tons for the same time of last year, and 299,702 tons for the similar period of 1882. The number of furnaces in blast remain at 95, and the public stock has been further reduced by 580 tons, and now amounts to 589,187 tons, against 589,767 tons for the same week of last year.

The imports of Middlesborough pig-iron into Grangemouth last week were 6740 tons, against 4782 tons for the same week of last year, being an increase of 1958 tons, and which leaves a total decrease for the whole of this year compared with last of 4414 tons. Owing to a scarcity of No. 3 the Middlesborough market has shown increased firmness, and although some sellers are quoting 37s. there is very little iron offering at that figure, and in some instances 37s. 1½d. has been paid. No. 4 is quoted at 35s. 6d. to 36s. The shipments continue satisfactory, those last week being more than 20,000 tons, and those for the whole month have been about 80,000 tons, while the stock in public store has been reduced by 92 tons. The manufactured trade keeps very quiet, and prices are steady at about 5*l.* 5s. for bars. Angles can be bought at 4*l.* 15s., ship-plates at 5*l.*, and sheets at 6*l.* 15s. per ton.

The Wolverhampton market is quiet, and somewhat unsettled by the threatened colliers' lock-out. Orders for all classes of iron are very scarce, and do not increase in anticipation of the forthcoming Quarterly Meeting. The quotation for common bars is 5*l.* 15s. to 6*l.*; for marked bars, 7*l.* to 7*l.* 10s.; and for Earl Dudley's, 8*l.* 2s. 6d. per ton. The Birmingham market continues to suffer from an excess of supply over the demand, this being a notable characteristic both in the raw and manufactured material. In common iron there is a good deal of irregularity in quotations, but marked bars are unaltered in price. Business all round is almost at a standstill, and shows no signs of improving yet awhile.

TIN.—There continues to be a large business done in this metal, and prices are very fluctuating, and seem most undecided whether to advance or recede, but considering the heavy fall that has already taken place in prices, a fall which seems to be by no means justified by the actual state of the market, the chances seem to be in favour of a rise rather than otherwise; and as the fall has been sharp the same characteristic may attend the recovery. Next week the statistics for this month will be out, and then it will be seen whether supplies have exceeded the demand, or whether the good deliveries will be sufficient to reduce stocks. In the last statistics it will be remembered that there was an increase in the stocks, and a very heavy fall has since been effected, not from that cause, but because of the general uneasiness which is felt by holders which has induced them to press sales. Any improvement in statistics would tend to remove that uneasiness, and make holders look at the market more in its right light.

Undoubtedly the fall has been sharp, and carried further than was required by existing events, unless, indeed, the market had been artificially upheld for months and months past. However, the course of the market during the past week would indicate that there exists a disposition to enhance prices, and one or two attempts have been made to raise quotations, and although they have not met with much success, yet they evidence a desire to operate for the rise as soon as a favourable opportunity presents itself. On the whole the market has lost during the week. The lowest quotation given on Monday for foreign was 82*l.* 10s., and on Tuesday fell away to 82*l.*, but speedily recovered to 82*l.* 7s. 6d., falling away on Wednesday again to 82*l.*, and afterwards remained steady at about that figure, but to-night is rather easier, closing at about 81*l.* 17s. 6d. per ton.

LEAD is dull, with sellers of Spanish at 10*l.* 7s. 6d., and of English at 10*l.* 15s. to 11*l.* per ton.

SPELTER remains quiet and the market is unchanged, with ordinaries at 14*l.* 7s. 6d. to 14*l.* 12s. 6d. per ton.

STEEL.—The market is very quiet, and there are still sellers in the North offering to sell rails at 4*l.* 12s. 6d. per ton

TIN-PLATES.—The demand keeps languid, and prices for cokes are a shade easier.

QUICKSILVER.—The importers experienced a considerable demand at the end of last week at 5*l.* 3s. 6d., and on Monday raised their price again to 5*l.* 5s., at which a fair business is reported.

THE MINING SHARE MARKET continues in a very depressed condition, and the dealers have again been occupied with a very limited settlement. Quotations remain about the same, and are mostly nominal. The mines chiefly dealt in have been Dolcoath, West Frances, Wheal Crebor, East Pool, Bratsberg, Wheal Agar, New West Caradon, and a few others.

TIN has been rather weaker, but no change has been made in the standards for tin since the 11th inst. One or two tin mines have been in request, but prices generally are weak and declining. The one favourable feature of the week as regards tin mines is the important improvement to the west of Harriett's shaft in Dolcoath, which brought the shares into demand, the price advancing to 77, and leaving off 74 to 76. Carn Brea are quoted 1½ to 2; Cook's Kitchen, 12 to 12½; East Pools not quite so firm at 41 to 43; East Blue Hills, ½ to ¾. The shaft is now down to the 10 level below the 50, or deep adit, and driving will soon commence on the course of tin gone over in the level above.

New Kitty, 1 to 1¼; South Condurrow, 8½ to 9; South Frances, 8 to 8½; Tincroft, 3 to 3½; Tresavean, ½ to ⅝; West Basset, 3½ to 4 West Frances have been active at 5 to 5½; the mine continues to look well. Wheal Agar, 16 to 17; at the meeting on the mine this afternoon the accounts showed a profit on the three months' working of 2929*l.*, and a credit balance of 3029*l.* A dividend of 3000*l.* (10s. per share) was declared. Wheal Basset, 2½ to 3½; Wheal Grenville, 6 to 6½; Wheal Kitty (St. Agnes), ½ to ¾. Killifreth, ½ to ⅝; at the meeting the accounts showed a loss on four months' working of 950*l.*, and a debit balance of 1541*l.* A call of 5s. per share was made.

The tin sold during the five months (45 tons) realised 2183*l.*; the agents appear to be sanguine of ultimate success. West Kitty, 11¼ to 11⅜; the 84 level east is worth 10*l.* per fathom; the 80 east 9*l.*; the 72, 20*l.*; the 60, east of rise, 15*l.* per fathom; the 60, east of cross-cut, 25*l.* per fathom. The stopes in the back of the 72 and 60 levels are worth 50*l.* per fathom in each. At Trevaunance, in the 50 east, the lode is worth 15*l.* per fathom for copper ore. South Kitty, ⅞ to ½; Phœnix, 2 to 2½; South Crofty, 3 to 3½; West Phœnix, ⅛ to ¼.

COPPER shows no sign of improvement at present, and there is very little doing in shares. Bedford United are quoted 1½ to 1⅝; Devon Great Consols, 2½ to 2⅝; Gunnislake (Clitters), ½ to ¾; New Cook's Kitchen, 1 to 1½; New West Caradon, 2s. to 4s.; Prince of Wales, 3-16ths to 5-16ths; New Caradon, ⅛ to 3-16ths; West Caradon, ⅛ to 3-16ths; West Crebor, ½ to ⅝; West Seton, 4 to 4½; Wheal Crebor, 1¼ to 1½. At South Penstruthal the agent hopes to have the flat-rod shaft down in a few days, and start the cross-cut to the lode. South Caradon, ¾ to 1. At Devon Friendship the 42 east is worth 8*l.* 10s. per fathom. The drivings east and west of ladder winze, in the adit level are worth respectively 8*l.* and 7*l.* respectively. The stopes are looking well.

LEAD continues to droop; there is scarcely anything doing in lead mines, and quotations are merely nominal. Vans are quoted 2 to 2½; Great Laxey, 10 to 11; Roman Gravels, 2 to 2½; D'Eresby Mountain, ⅛ to ⅜. The lode in the bottom of No. 6 level is worth 1½ tons of lead ore per ton. Old Shepherds, ¼ to ⅜; East Rose, 7-16ths to 9-16ths; New Langford, ⅛ to 3-16ths; Lead Hills, 1¼ to 1½; Gwernymynydd, ½ to 1; Weardale, 1¼ to 1⅜; the manager reports that the work in this company's mines is going on steadily, the different points are looking about the same as last week, and indications lead him to anticipate further discoveries at an early date. At South Darren the 130 west continues wide and strong, worth 2 tons silver-lead ore per fathom. The four stopes are worth together 6½ tons of lead ore per fathom; Home Mines Trust, 7-16ths to 9-16ths.

FOREIGN MINES.—The amount of business done has been very small, and prices show a decided decline. Alamillos are quoted 1⅛ to 1⅜; Almada and Tirito, 3-16ths to 5-16ths; Australian, 1⅜ to 2⅛, ex 10s. return of capital; Birdseye, 1 to 1⅛; the warrants for the 2s. dividend declared on June 17 will be posted on Monday. Bratsberg, 1⅛ to 1⅜; Callao Bis, 5-16ths to 7-16ths; Cape Copper, 41 to 43; Chile Copper, 3-16ths to 5-16ths; Chontales, 3-16ths to 5-16ths; Colombian Hydraulic, ⅜ to ½; Colorado United, 2 to 2⅛; Fortuna, 2⅜ to 3⅛; Frontino and Bolivia, ½ to ⅝; Kapanga ⅛ to 3-16ths; a telegram received from Captain Argall says:—10 tons of quartz have yielded 25 ounces of gold. Scotty's improved. Lake Superior, ⅜ to ⅝; La Plata, 3-16ths to 5-16ths; Linares, 2⅜ to 3⅛; Lisbon Berlyn, ⅜ to ⅝; it is gratifying to find that diggers who have worked on the property entertain a high opinion of its auriferous value since one claims something like 13,000*l.* for his interests that he has been deprived of, and, it seems, prefers litigation to the acceptance of half that amount; it is to be hoped he will be able to establish his position that 13,000*l.* is a fair value for the claim he held.

Mason and Barry, 8½ to 9; Montana, 1⅛ to 2; Michipicoten, ½ to ⅝; New Callao, ⅛ to ¼; New Emma, ¼ to ½; New Potosi, ½ to ⅝; Nouveau Monde, 1-16th to ⅛; Organos, ⅜ to ½; Orita, 13-16ths to 15-16ths; Panulcillo, 4 to 4½; Richmond, 3 to 3½; Rio Tinto bonds, registered, 98 to 100; ditto, shares to bearer, 15 to 15½; Ruby and Dunderberg, ⅜ to ½; Schwab's Gully, 7½ to 8; South Australian Mines Corporation, ⅛ to ¼; St. John del Rey, 65 to 70; Tharsis, 5½ to 6; Tolima, A, 7½ to 8; ditto, B, 6½ to 7; Transvaal Gold, ¾ to 1¼. United Mexican, 3¾ to 4¼; on Tuesday the directors received a telegram: The excess of returns over outlay in the mine of San Cayetano de la Ovejera for the week ending June 21 is $12,000. In the mine of El Diamante the excess of outlay is $200. The despatches, received June 23, state that in place of the $25,000 previously advised, Mr. Hay intends to remit a bill of exchange for 5000*l.* on the 9th inst.; this will probably arrive by the next mail. West Callao, ⅛ to ¼.

The Market for Mine Shares on the Stock Exchange has remained without animation, and not only have Dolcoath risen fully 5*l.*, but prices generally have been fairly supported; and the report of the City Guilds Commission, issued on Wednesday, cannot but be regarded as encouraging to miners, since two of the persons who sign it—Lord Derby and the Duke of Bedford—indicate the direction in which their own property holdings may upon a principle suggested by themselves be legislated about, so as to be made more beneficial to the community than they are at present. It is stated, though we know not with what degree of accuracy, that if the minerals beneath Lord Derby's Irish estates were restored to their proper owner (the State) those minerals would not contribute so little as now to the general weal; and as to the Duke of Bedford it is beyond dispute that he is one of the mine lords of the western counties whose liberality has been the most questioned whenever an attempt has been made to justify the severance of the minerals from State ownership, on the ground that the present system works "well enough." It is curious, moreover, that in a report signed by the Duke of Bedford any thing should be said against feasting, since every year he himself sets the bad example of contributing one buck for the tenants on his Covent Garden estate to dine upon—an extravagance by no means compensated by the fact that the tenants have personally to bear the cost of, and pay cash down for, wine, vegetables, and almost everything else—except the venison—that is consumed at the social (?) gathering. It is true that in dealing with his mine tenants he does not display such reckless generosity, but as he now reports that since the income of the City Guilds in the aggregate is 800,000*l.* per annum—what is the income of the Duke?—therefore commissioners should be appointed to expend that income for "objects of acknowledged public utility;" surely the Duke of Bedford would not be so illogical as to contend that there would be any injustice in administering the Bedford estates by Government Commissioners, at least so far as regards the minerals, which do not of right belong to the subject at all, but to the State. Annihilate private mine lords by restoring the minerals to the State, and much will have been done toward restoring the prosperity of home mining; and let the City Guilds Commissioners' report be taken as the basis to work upon in the matter.

Our usual telegram from Cornwall this evening states that during the past week the Cornish mine share market has been generally quiet, but active for Dolcoath and West Frances. The improvement at the former has caused considerable business in the shares, which show a marked advance. West Frances continues to look remarkably well, and is regarded with much favour, the more especially as the present price is low. Tincrofts are a trifle stronger. West Kitty is firm, and East Pool looks well, although business has been quiet. At Killifreth the accounts showed a loss of 950*l.*, increasing the debit balance to 1541*l.*; a call of 5s. per share was made. An encouraging report was presented. Wheal Agar meeting was held to-day; the accounts showed a profit of nearly 3000*l.*, and a dividend of 10s. per share was declared. The agent's report was most encouraging; a committee were appointed to act respecting the question of erecting a compound engine now on the mine or procuring a new one.

Devon Great Consols, 2½ to 3; the 205 east is producing 2 tons of mineral per fathom, and the Railway shaft is now down 15 fathoms below this level, where a cross-cut will be put out to intersect the lodes close to the shaft. The 112 west is worth 2 tons per fathom, and the Western shaft is again being sunk below the 32 fm. level.

Devon Great United, ½ to ⅝; an increased quantity of copper ore will be sampled this week, being about 90 tons of fair average quality.

Drakewalls, ½ to ⅝; the 90 is being pushed forward with all expedition, in order to get under the long run of rich tin ground seen in the level above, and where good results are expected. A sale of 16 tons 13 cwts. of black tin was made on June 19.

Kit Hill, ⅜ to ½; the tunnel level has been driven 15 ft. during this week, and the lode in the 88 west, so far as seen, is fully 5 ft. wide, and of a promising character.

South Devon United, ¼ to ⅜; the lode in Martin's shaft, sinking below the 120, continue to be valued at 23*l.* per fathom, and an improvement is expected in the 120, driving west.

South Frances, 8¼ to 8⅜; Pascoe's shaft is being sunk in a rich lode worth fully 40*l.* per fathom, and fair speed is being made with its development. The 236 east is worth 15*l.* per fathom, and the 236 west is worth 22*l.* per fathom, and more lode standing both north and south of the end. The stope in back is worth 24*l.* per fathom, and the 226 east is worth 14*l.* per fathom, with more lode standing. The various stopes and rises in 226 and 185 are valued at 165*l.* and 170*l.* per fathom. The agent states that the usual quantity of tin is being prepared, and the mine is looking well. The meeting of shareholders will take place on July 10.

In Lead Mine Shares there has again been very little business doing, and no improvement is observable in the price of the metal. Leadhills, 1½ to 1¾; an important improvement has taken place in the 100 fm. level—the deepest level in the mine—where the lode is producing 2 to 3 tons of rich lead ore per fathom.

Roman Gravels, 2 to 2½; a great and important discovery has been made at the deepest part of the mine, going north of new engine-shaft, at the 125 fm. level, where the lode is now 6 ft. wide, and is worth fully 4 to 5 tons of rich lead ore per fathom. The 95 is worth 1½ ton per fathom, and the 80 fully 2 tons per fathom. In the 80 cross-cut west the lode has been cut into 4½ fms., and there is no sign of being through the vein. This is a most important point of operation, to be watched by all interested in this undertaking. Lead ore of 100 tons was sold last week, and a sampling of 100 tons of lead ore has been made for sale next week. It is stated at the company's office that Mr. Jasper More has not yet given his consent to a reduction in the royalty, so much to be desired by the shareholders during the present great depression in the price of lead.

Ruby and Dunderberg, ⅜ to ½; the weekly report does not advise any change of moment at any of the mines; the developments were progressing satisfactory, and fair shipments of ore had been made. It is understood that later advices have since been received, reporting that connection between the tunnel and the cave at the Lord Byron had been made.

The Chile Gold Mining Company's half-yearly interest on the Ten per cent. Mortgage Debentures will be paid on and after Monday at the National Bank of Scotland.

The Prince of Wales Slate Company will on July 1 pay the fourth quarterly dividend at the rate of 10 per cent. per annum on the guaranteed shares.

John Brown and Company meeting on Wednesday a dividend of 6¼ per cent. per annum was declared, and the retiring directors and auditor re-elected.

At the Imperial Ottoman Bank general meeting, on Wednesday, a dividend of 1*l.* per share was voted, and will be payable in London on and after July 1.

The Railway Debenture Trust Company announce that the interest on the 4½ per cent. Debenture Stock, due July 1, will be paid on and after that date at Messrs. Glyn, Mills, Currie, and Co.

The interest on the debentures of the New Zealand Mortgage and Agency Company, due June 30, will be paid on and after that date at the Bank of Scotland, Edinburgh and London, or any of its branches.

The Municipal Freehold Land Company directors have resolved to pay an interim dividend of 5 per cent per annum.

The Municipal Building Society notify that a dividend at the rate of 5 per cent. for the quarter ended June 30 on all shares has been declared.

The Discount Corporation of Great Britain final liquidators dividend of 6s. 8d., making 20s. in 1*l.*, is now payable.

Mr. John Wilson, of Chapel Hill, late President of the Scottish Chamber of Agriculture, who is now in New Mexico, United States, has agreed, at the request of the trustees of the Maxwell Company, to visit and inspect the range of the 1,400,000 acres, of which the company holds a lease, and the cattle belonging to them, with a view to preparing a report which is to be issued on his return.

The (late) Amsterdam Exhibition medals awarded to the successful British exhibitors will be distributed by the Lord Mayor at the Mansion House on Monday at 3 o'clock.

TRADES UNIONS, AND THEIR VICTIMS.

It has usually been supposed that although Trades Unionism might cause some annoyance to employers who were unlucky enough to incur the displeasure of the executive, yet to the working men who were members of them they were an undoubted advantage; but from an important case heard before Mr. T. Jordan and a jury in the Manchester Court of Record, on Wednesday, it is evident that the members are far more entitled to be regarded as the victims of the tyranny of the Union than the masters. The plaintiff was a machinist, who had been a member of the Amalgamated Society of Engineers, Machinists, Smiths, and Pattern Makers, and he sought to recover from the society 19*l.* 18s. for benefit while out of work for 52 weeks. While he was acting as foreman of some works, the men, against their wishes, were ordered by the society to come out on strike. He did not obey the order, and was expelled the society. The period during which he was out of work was after his exclusion.—The judge, after examining the rules, said he could imagine nothing more iniquitous or illegal than one as to piecework, which provided that any member receiving more than any other members working on the same job should divide the surplus with them under pain of fine and ultimately expulsion.—Mr. Sutton said there was sufficient to show that the society was an illegal combination, and therefore a civil action against it could not be put; further than this, there was a contingent fund for restraining trade and encouraging strikes; and the plaintiff had knowledge of these things.

The objectionable feature in the case appears to be that the society can enjoy the privileges of a legal corporation as long as convenient and then actually plead that it is an illegal combination, which therefore cannot be proceeded against by civil action. For the plaintiff it was contended that in spite of the alleged rules he could recover against the society as a friendly society.—The plaintiff, in his evidence, said the men working under him were called out on strike against their own wishes.—The Judge: And this is a free country where there is freedom of contract? The society, he added, were trying to subvert the law of the country.—In summing up, the Judge said that, however iniquitous the defence was, however dishonourable the jury might take it for the defendants to set up their own illegality and wrong as a bar to the action, the law must be administered as it existed; but the case, however hard, might have a good effect in showing working men how helpless they were in joining illegal federations like this.—The jury found that the society was a trade union, and gave a verdict for the defendants.—The Judge said that as he had the power he should deprive the defendants of every penny of their costs. He was astonished at the defendants showing their heads in a court of law before a judge and jury.—The foreman of the jury said they endorsed every word of the judge's opinion.

WHEAL COATES.

SIR,—It appears from the recent report of Capt. Josiah Thomas, of Dolcoath, on this mine that the 80 cross-cut to intersect the West Kitty lode may have to be driven something like 50 fms. to accomplish the object. Why not do this work by boring machinery? I notice by the West Briton of this week that 13 fms. 1 ft. of hard ground have recently been driven at East Pool Mine by one boring machine—splendid result! The saving of time by the use of boring machinery is immense; and as "time is money," I maintain that in the long run this system is far preferable to the primitive method of hand-labour now in vogue. The first cost is great, but the benefits are incalculable. In my judgment, the subject is worthy attention. Prejudice should be swept away, and an enlightened, determined, and spirited policy adopted.—*Walbrook, June 27.* F. J. H.

ANGLO-AMERICAN BRUSH ELECTRIC LIGHT COMPANY.—In the Queen's Bench Division, on Thursday, the company's appeal in Muir against themselves was dismissed with costs. This was an application for a fourth trial in a case which had been already three times tried, and had been repeatedly before the Divisional Courts, and once or twice in the Court of Appeal, and raised, moreover, a very interesting question. It was an action upon a contract entered into by letters in 1882, under which the company were to take a new and peculiar machine for boring "electric generators," which would weigh about 15 tons, and of which the price was to be 736*l.*, but which the company had declined to receive, upon the ground that it was delivered too late, not having been completed until after a lapse of nine months. The dispute had been as to the time within which the machine was to be completed, the company wishing to have it in a certain time, and as the plaintiffs, the makers, had agreed to "do their best to complete it as nearly as they could" within that time, the question which had arisen, and which had sorely perplexed both judges and juries, was what those terms really meant, and within what time the machine was to be completed. The company had desired it to be delivered in eight or nine weeks. The plaintiffs replied that it was quite impossible to do it in less than 13 or 14 weeks. Afterwards the plaintiffs wrote that they would do their best to deliver the machine as nearly as possible "in eight or nine weeks," and the great question in the case which had puzzled the courts and perplexed the Court of Appeal was what those words meant. In the course of an elaborate judgment it was remarked by the Court that on *prima facie* evidence it did seem strange that a manufacturer who had only asked three months to make the machine had taken nine months to make it. It certainly had been urged that the company for nine months had not asked for it, and that therefore the plaintiffs had supposed they were in no great hurry for it. That ground, however, for delay had not been made out; but on the whole evidence, and especially the delay on the part of the company, the case had been properly left to the jury, and there were no sufficient grounds for disturbing the verdict. The case now, at all events, had been fully tried by the jury on a proper direction, and as the question was for them the time had now come to put a stop to this sad litigation, and, therefore, the verdict must stand, and this application for a new trial be dismissed with costs.

COMPRESSED LIME CARTRIDGE EXPERIMENTS.—An interesting trial of the lime cartridge process took place on June 20 at the Fair Oak Colliery, Rugeley, under the auspices of the Compressed Lime Cartridge Company, of London, and by the courtesy of the managers, Mr. Thomas McGhie and Mr. Charles Browell, a number of gentlemen were invited to witness the experiments, including Mr. W. Fairley, Mr. Richard Taylor, Mr. S. B. Mills, Mr. Maiden, and others. Considerable interest was taken in the proceedings owing to the increasing necessity of reducing the risk from explosions of fire-damp, now so apt to arise from the firing of blasting powder. Since the explosible nature of coal dust has been known, an impetus has been given to the use of contrivances designed to prevent an undue sacrifice of human life, and amongst them the method of rending the coal by the expansive force of lime when in contact with water, has attracted some attention amongst the mining profession, and still more among other classes of people throughout the country. The coal experimented upon is known as the Six-feet Six-inch shallow seam, and is both hard and strong. Drill-holes were made of 3 ft. 4 in. by means of the company's 3 in. drill, and were six in number occupying a space of about 12 yards of facing altogether. After the holes were drilled seven cartridges were placed in each hole, and as they had grooves on the upper surface of each one, so that a tube could be inserted in connection with a hydraulic pump, it was an easy matter to force the water along the tubes and through their perforations into the lime cartridges beneath. The time occupied in charging all of the six shots was 20 minutes, and after a few more minutes distinct evidence was given that the chemical expansion had already begun, for the cracking in the interior of the coal could be easily heard, until at length after the lapse of 40 minutes a louder rumbling announced the impending fall and quite 20 tons of coal came crashing down. This was the estimate formed by the experts present, including the company's district agent, and it was noticed that the coal was both large and round, as well as being free from slack. The opinion was unanimously expressed that the experiments were satisfactory.

TECHNICAL EDUCATION—THE CITY AND GUILDS INSTITUTE.

The opening of the Central Institution of the City and Guilds of London for the Advancement of Technical Education by the Prince of Wales, on Thursday, marks a new step towards the attainment of those facilities for technical education which are supposed to give the industrial classes of the Continent so many advantages over those of our own country. In thanking his Royal Highness for having consented to open the Institution, the Lord Chancellor said that the building, which had been in course of construction for three years, would, when fully equipped, have cost 100,000*l.* The ceremony marked the completion of the scheme for the advancement of technical education as organised by the City and Guilds of London. It was a scheme that embraced the education of workers of every class.

The Prince of Wales, in reply, said he had listened with attention to the address, and it gave him great pleasure to preside at the opening of the Institution. He thanked them for the expression of regret for the loss the Royal Family and the nation had sustained by the death of the Duke of Albany. He was gratified at the response which had been made to the letter he had addressed to the City companies, and thought there was no cause to which the companies could more properly devote their funds than to the encouragement of technical education, which, with the increasing use of manufacturing machinery, had become so necessary. Although in regard to technical instruction we were behind our foreign competitors, the increasing facilities which were being given had already influenced the progress of our manufacturing industry. As the President of the Institute, he had noted with much satisfaction the rapid development of the work which the Council had initiated. He was anxious to have an opportunity of expressing the obligation they were all under to Mr. P. Magnus for his unwearied and successful exertions in organising the Institute. He had no doubt that the facilities for instruction given by the Institution would enable the managers and superintendents of our manufacturing works to obtain more readily than hitherto that higher technical education which was required. The demand for technical instruction had increased so rapidly during the past few years that the supply of teachers was not keeping pace with it. He had noticed with satisfaction that in the scheme for the organisation of the school due provision was made for the gratuitous instruction of teachers from all parts of the United Kingdom. He would be glad to see other corporations and individuals following the example of the Clothworkers' Company by establishing scholarships which would connect the elementary schools of the country with the Institution. Hitherto, owing to the disadvantage of the want of sufficient technical instruction, the manufacturing industry had not attracted to its pursuits the best intellect of the country.

The ceremony passed off most successfully, and if the labours of the Institute lead the way to the encouragement of a really useful technical instruction—though the study of the papers set at the examinations certainly does not justify any very sanguine hopes of this—it would alone form a justification for altogether ignoring the recommendations of the City Guilds Commissioners. Commenting upon the opening ceremony of Wednesday, a contemporary makes some well-considered remarks, which are, at least, worthy of careful discussion. The universities and public schools generally must, it is remarked, "remain primarily literary bodies, and efforts to impart a fictitious glow of science to their character can only end in producing a miserable compromise. It follows that the remedy must be sought in the creation of institutes like the one under consideration. Each of the different kinds of education is emphatically *sui generis*, and this plan seems to recognise the fact effectively. By its aid manufacturing industries will be able to attract to their pursuit a fair proportion of the intellect of the country, a thing which, as the Prince of Wales reminds us, they have hitherto not succeeded in doing. Technical education is now very generally recognised as an important factor in national life. The report of the Royal Commission, which the Lord Chancellor quoted, shows that we are still behind some nations in the provision of technical schools; but it also shows that the axe has been laid to the root of the tree. It will be possible in the future for intelligent workmen to obtain a scientific knowledge of their trades, which cannot fail to benefit them materially. But benefit to the individual means in this case benefit to the trade in which he engages, and thus must lead finally to the development of commerce generally. It is not to be imagined in these days that every workman who may apply himself to education beyond his fellows will make the marvellous position which many a workman has done before. The general spread of education forbids the continuance of abnormal successes. At the same time it adds largely to the happiness and fortune of the many, and promises to justify the picture which the Prince of Wales drew of increased prosperity in the future.

OSCAR GOLD MINE.—The following are the exact figures relative to the gold extracted from the 29 cwts. of stone referred to last week:—

Stone.				Ozs.	dwts.
		Coarse gold left in sieve ..... Produced...		4	3
1 cwt.	3 qrs.	2 lbs.	,, ...	0	16
7	0	10	,, ...	2	17
19	1	6	,, ...	7	11
28	0	18	,, ...	15	7
0	3	18¼ samples taken.			

29 cwt. 0 qr. 8¼ lbs. total weight of stone imported.

It will thus be seen that the quantity of stone barely exceeded 28 cwts., out of which the 15 ozs. 7 dwts. of gold were extracted.

NORTH MEXICAN SILVER MINING COMPANY.—At the statutory meeting of the North Mexican Silver Mining Company held yesterday, it was stated that satisfactory progress has been made since the formation of the company a few months ago. The company seems to possess a solid and substantial property, holding out every prospect of becoming a success. A full report will appear in next week's *Mining Journal*.

MINING IN QUEENSLAND.—The Chance Claim Gold Mining Company on the Musgrave gold field, have crushed 29½ tons of stone for 230 ozs. of gold. There are numerous applications for shares in consequence. A telegram which has been received from Herberton states that what appears to be a veritable lead of stream tin was struck under the basalt ½ mile from Herberton, and it is not yet bottomed. At the 60 ft. level the prospects are very encouraging. Claims have been staged out in all directions.

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MESSRS. WATSON BROTHERS, in referring to their public Circular in the *Mining Journal*, would also observe that they BUY and SELL SHARES at the *nett* market prices of the day in all well-established and respectable Mining Companies; also in English and Foreign Funds, Railway Stocks, &c

VICTORIA GOLD COMPANY—(To the Editor *Mining Journal*).—The following is a copy of letter sent to the Editor of Money by Major Jocelyn and Admiral Powell:—"Victoria Gold Company: June 23 (Editor of Money)—Sir: Our attention having been called to an article in your publication, No. 164, of 18th inst., wishing to know on what hypothesis we could justify our connection with the Victoria Gold Company, we have the pleasure to inform you that our justification consists in our firm belief that the company is one of the most legitimately conducted, and will eventually prove one of the most prosperous of the undertakings of the present day.—We are, your obedient servants (signed), A. G. Jocelyn, R. A. Powell."

COPPER ORES.

Sampled June 4, and sold at the Royal Hotel, Truro, June 19.

Mines.	Tons.	Price.	Mines.	Tons.	Price
Devon Great Consols.	105	£1 1 6	South Caradon	35	£3 19 0
ditto	100	0 18 6	ditto	27	5 18 0
ditto	97	0 18 6	Bedford United	94	4 1 6
ditto	96	1 1 6	ditto	63	2 13 6
ditto	92	1 1 6	ditto	46	1 19 6
ditto	91	0 17 6	South Devon United	58	3 18 0
ditto	89	0 18 6	ditto	55	0 8 0
ditto	50	3 7 6	ditto	39	3 2 0
ditto	45	5 5 6	ditto	29	0 16 6
ditto	35	4 19 6	ditto	19	4 7 6
Wheal Crebor	97	3 4 6	Gunnislake (Clitters)	77	4 10 0
ditto	95	2 9 6	ditto	74	3 16 0
ditto	90	2 19 0	Holmbush	80	0 16 0
ditto	85	2 9 6	ditto	61	0 17 0
ditto	73	2 18 0	ditto	9	2 1 0
ditto	69	3 8 0	Gawton	82	0 8 0
South Caradon	83	3 10 6	East Caradon	62	3 17 6
ditto	60	3 0 0	Marke Valley	44	3 16 6
ditto	51	3 11 0	ditto	16	1 17 0
ditto	50	0 14 6	Glasgow Caradon	60	2 19 6
ditto	44	3 3 6	Mid-Devon	19	2 19 6

TOTAL PRODUCE.

Devon Great Con.	800	£1239 8 0	Holmbush	150	£ 134 6 0
Wheal Crebor	507	1461 9 6	Gawton	82	32 16 0
South Caradon	350	1235 2 6	East Caradon	62	240 5 0
Bedford United	203	642 8 6	Marke Valley	60	195 16 0
South Devon Uni.	200	476 3 0	Glasgow Caradon	60	178 10 0
Gunnislake (Clit.)	151	627 14 0	Mid-Devon	19	56 10 6

Average standard ..... £ 90 19 0 | Average produce 5¼
Average price per ton £3 9 6
Quantity of ore ..... 2644 | Quantity of fine copper, 151 tons 13 cwts.
Amount of money ..... £ 6521 9 0
LAST SALE.—Average standard, £ 79 16 0 | Average produce 6¼
Standard of corresponding sale last month, £ 92 17 0 | Produce, 5¼

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	665½	£1466 10 5
P. Grenfell and Sons	544 5-8	1635 0 5
Nevill, Druce, and Co.	476½	717 2 11
Williams, Foster, and Co.	443	1142 10 6
Elliott's Metal Company	321½	931 18 3
Charles Lambert	187	578 6 6
Total	2644	£ 6521 9 0

Copper Ores for sale on Thursday next, at Tabb's Hotel, Redruth.—Mines and parcels.—Mellanear 625—South Tolcarne 103—New Trumpet Consols 23—West Poldice 24.—Total 780 tons.

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CROSBY LOCKWOOD and Co., 7, Stationers' Hall-court, London, E.C.

Notices to Correspondents.

COAL CUTTING MACHINERY.—Can any correspondents state in what mines in Great Britain coal cutting machinery is at present used; also what machines are employed, and what results are obtained. The information is required to enable a colliery owner to determine what machine he will introduce.—A. [If inventors reply to this they must give descriptions and results briefly, and so as to be intelligible without illustrations or tables; otherwise the reply cannot be published.—ED. *M. J.*]

POST HOLE DIGGER—"Australian" (Brompton).—The implement you refer to is "Kohler's Little Giant," which we suppose is an American invention, as we have seen it advertised in the Iron Age, of New York, and we think other American papers. It is not easy to describe without drawings; but suppose two hollow navvy spades, with about 4 ft. handles, set so forward that when two are placed together a joint can be formed by a bolt. When the handles are together the points of the spades stand thus ( ). The implement is thrown down with a jerk on the spot where the post is to stand. The handles are then pulled open on the joint, and the spade points take the position (), enclosing a portion of earth, which is drawn up and thrown aside. This operation is repeated until the hole is deep enough. The spades are then separated by removing the bolt from the joint, the post is placed in position, and the spades can be used by two men, if necessary, to fill in the hole, or one may fill and the other ram, the handle of the spade being a kind of crow-bar rammer. We do not know whether the implement is patented elsewhere than in America. If not, any good mechanic engaged in spade and pick making would make you some. The price in America is under 10s. each.

ROYAL UNIVERSITY OF MINING AND SCIENCE.—"Delta": Your letter is inserted, but as the evidence given is against the system, and not against the men, it has been curtailed and modified to remove personalities. Huxley in complaining that "there was a want of honest thought displayed in the papers on animal physiology," certainly does not infer that "other subjects should be neglected to allow time to get up animal physiology and biology." An argument can never be strengthened by rabid misrepresentation. We will allow you to strike as hard as you like, but you must strike fairly. Any system—the South Kensington included—which demands uniformity of teaching to the extent of preparing all the students in the kingdom to pass upon one set of examination papers is radically and irreparably bad, since practically it restricts teaching to the use of one set of text books or plagiarisms of them, but the Normal School of Science and Royal School of Mines is not claimed to be perfect, so that reform and improvement is no doubt possible. A student's strength or weakness is more exposed by 10 minutes *viva voce* than by 1000 examination papers, and a year's personal instruction from a competent master is worth 10 years' reading even if that master be the author of the books read?

COMMERCIAL LAW—BILLS OF EXCHANGE.—Can you or any correspondent enlighten me as to my position in the following circumstances:—A customer owed me 254*l.* 10s. on June 30, 1883, and authorised me to draw upon him at three months' date for the amount, which I did. The bill became due, was dishonoured, and noted on Oct. 15. My current account against the customer for September quarter was 34*l.* 15s.; this was delivered Oct. 2 and paid Oct 16; the remittance being accompanied by a note stating that he cannot pay the bill just at present, but sends current account as he does not wish to suspend business with me. I thought this quite satisfactory. Now, the chartered accountant who superintends my books directed my clerk to retransfer the dishonoured bill from the bill account to the customer's account, and accordingly it is entered in the customer's account for the December quarter: "To dishonoured bill and noting 254*l.* 11s. 6d." The current items in the December account amounting to 32*l.* 5s., an account is delivered on Jan. 3 for 286*l.* 16s. 6d. As I can get no part of this money from the customer I, on March 27, direct my solicitor to proceed for the 254*l.* 11s 6d.—an action on a bill of exchange being unanswerable—and leave the 32*l.* 5s. open. This he tells me he cannot do since by retransferring the bill I have ignored it as a bill, and make it "goods sold," as much as any other item in the December account. He thinks I might have a ground of action against the chartered accountant whom I employ for sacrificing the security, if I can prove that other creditors proceeding on bills after March 27 succeed in recovering their money while I, having to proceed as for an ordinary debt, fail to recover mine.—A.H.G: *Manchester.*—[We have seldom heard of such a question being raised, though there can be no doubt that the solicitor is right that the retransfer of the bill and delivery of the December account for 286*l.* 16s. 6d. renders the bill worthless as a bill, but you have no ground of action against the public accountant, who, in a legal sense, is merely your servant, as much as your clerk or footman is, and an action will not lie against a servant for mere stupidity without fraudulent intention. Your remedy is to discharge him. Public accountants ruin more businesses than bad trade, or careless clerks, do.]

Received,—"H. G. M."—"H. S."—"G. J. G."—"J. P. N." (Pretoria): As your letter only bears the Pretoria post mark, kindly state in your next why your note is dated from another place and your letter for publication signed with other initials than your own, which we have, of course, substituted.—"Wm. Barry" (Victoria Gold Company): We have made no attack upon you; in fact, we know nothing about you. As the Alderman considered that the wrong done you by the company was met by the fine of one penny inflicted upon the said company, we cannot publish any reply to the secretary's report of the decision except on the written authority of the Alderman or the Chief Clerk; but we print your assertion—"I was at first a large shareholder, but now hold only one share"—as evidence that you are disinterested.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, JUNE 28, 1884.

AMERICAN INSTITUTE OF MINING ENGINEERS.

The spring meeting of this useful and prosperous institution, which was held at Chicago, on May 27 and following days, was one of the most successful in the society's history. It was well and influentially attended, and the papers read were of sound practical utility. The Chairman of the local committee, Mr. O. W. Potter, President of the North Chicago Rolling Mill Company, having expressed his gratification that Chicago had been chosen as the place of meeting, introduced the Hon. Carter Harrisson, the Mayor and chief magistrate of the city, who in an appropriate address of welcome said that he always regarded it as a pleasure to welcome the representatives of any industry to the city. They would show them a city but recently arisen from a quagmire to the fourth city in the world. While they were being shown the city, with its beautiful parks, unequalled by any in the world, and taking in the sights, they might find somebody who could take them in. But he hoped that such a thing would not happen. The engineers were semi-scientists and semi-labourers. He went on to show what a mining engineer's qualifications should be, and that they were fully understood and appreciated by the people of Chicago. Therefore they welcomed them. All that the Institute did or would do he flattered himself would be for the benefit of the Garden City. The Institute was welcomed with a warm heart, and he hoped that they would gain by having come to Chicago, and upon behalf of its people he extended to them a cordial greeting.

Mr. J. C. Bayles, President of the Institute, responded in its behalf, gracefully acknowledging the honour and warmth of the welcome, and was gratified to know that the value of the work of the society was appreciated, and that the members were so heartily welcomed by the Mayor. No one had done so much to open up the Western territory as the miner. If Chicago was glad to welcome them, they were glad to come here. There was much in the city that they wanted to see, and if rumour was right there was much that they did not want to see, notwithstanding it was "the best governed city in the world."

STUDY OF IRON AND STEEL.

The PRESIDENT of the Institute then delivered his inaugural address, in which he said:—The prominence which has been accorded in the programme of this meeting to the discussion of subjects connected with the study of metals, especially iron and steel, has naturally given direction to my thought. It seems to be characteristic of invention and investigation that they conform to no law of regular and uniform development. From the measurably firm ground of accepted truth and verified experience, the work of original investigators is projected into the void of the unknown; and so rapid and important are the accretions of fact around such slender spars of well-directed speculation that it seems for a time as if we might go on extending and building them up until the void was fully and safely bridged. But such a line of investigation is like a cantilever with a pier at one end and nothing at the other. The limitations, not only of knowledge but of speculation, become evident as we load hypotheses upon the unsupported end of our structure; and to make our work of value we must find a solid basis somewhere else, built thereon a pier, and project therefrom a second cantilever. When these meet and are securely united, we have spanned one of the spaces between facts learned by observation and experience, and can safely pass over to a point from which new speculations and verifications may serve as a basis for further progress. We are impressed with the appropriateness of this figure when we examine the steps by which we have gained what little knowledge we already possess of the composition and properties of iron and steel. That we know as much as we do concerning them is surprising when we reflect that among our membership are many whose lives almost include the period in which these materials have been intelligently and systematically studied.

After tracing the progress of chemical science applicable to iron and steel analysis, and referring to the labours of Paracelsus, Boyle, Markgraf, Bergmann, Klaproth, and others, he continued:—Karsten, in 1820, recognised the influence of carbon on iron, and stated his belief that iron and steel constitute a continuous series, there being no distinct lines of separation between them. In his judgment it was simply a question of carbon percentage where in the series, a piece of iron or steel belonged. In his Metallurgy, published in 1830, he notes the fact that pig-iron contains carbon, silicon, sulphur, phosphorus, manganese, calcium, magnesium and chromium. It is probable, however, that all these elements had been previously recognised and described. As early as 1815 there was more or less speculation whether hardness or softness in steel were due to physical or chemical causes. Faraday is credited by Percy with having been, in 1882, the first to point out that a piece of hardened steel dissolved completely in hydrochloric acid, while soft steel always yielded a certain amount of carbonaceous residue when subjected to the action of that solvent. David Mushet, in Iron and Steel (1840) gives a very good idea of what was known of metallurgical chemistry at that time. He mentions certain ores which contain "phosphat" of iron, which was generally believed to account for the fact that the iron made from them was cold-short. Mushet, however, was by no means certain of the cause of cold-shortness. Phosphorus, he tells us, had long been regarded as the prime cause of this quality in iron, but by the practical observer this theory could not be considered tenable, for it had always been noticed that the most perfect qualities of iron, notably some of the Swedish makes, gave out in working a very strong phosphoric smell. Regarding the condition in which carbon exists in iron, Mushet says—"In the works of those who have treated on iron I have never yet seen carbon which exists in crude iron distinguished from that absorbed by malleable iron in the process of converting it into steel. I could," he continues, "adduce many facts which to me appear quite conclusive to prove that carbon exists in crude iron in a concrete state, separable by mechanical division, and that it is united to steel in a gaseous state by the combustion of its base, inseparable in any form by the most minute mechanical reduction." It is surprising to note the earnestness and gravity with which, in 1840, these statements were made. It shows the newness of the knowledge which nowadays serves as the starting point for discussion on such topics.

Mushet treats very fully of the effect of different substances on the quality of iron. He made a number of experiments by fusing iron with different fluxes in crucibles, and noting the quality of metal produced. One section of his book is devoted to the different proportions of carbon which constitute iron and steel, and he gives the results of 14 experiments. His method was to fuse a certain number of grains of wrought-iron and charcoal in varying proportions, and note the increase of weight as showing the amount of carbon taken up. Karsten, however, promptly challenged the accuracy of his methods, and proceeded to show that Mushet's tables giving the carbon percentages in iron and steel were entirely wrong—much as chemists of the present day are prone to do upon occasion. It is unnecessary to follow from this point the progress of metallurgical chemistry towards a scientific basis. Its general employment as a means of assisting makers to control the character of their product concerns us more, and this is almost within the memory of even the youngest of our membership. Most of us can recollect when the dependence of the ironmaster and the engineer who cared to know the chemical composition of a piece of iron or steel was upon the general analytical chemist. When the influence of our technical schools began to be felt, and young men well equipped for the work began to displace, in the management of furnaces and mills, those who had gained their knowledge in the school of experience, where the instruction is not always thorough in proportion to the cost of tuition, the laboratory began to be recognised as an essential part of an iron or steel making plant, and in nearly every establishment with any pretensions to completeness the chemist has become an important member of the staff. But it is not more than 14 years ago that this was the exception rather than the rule.

When the demand for analytical work in connection with the iron and steel industry began to be felt, it brought into the service of the ironmasters a great many clever and ingenious chemists at home and abroad, and a varied and valuable literature of metallurgical chemistry was soon created. The need of accurate analysis was so evident that their importance was, perhaps, somewhat exaggerated; and for a time it seemed as if we might safely look to the chemist to answer every question which could be raised by the ironmaster or the engineer. Our confidence is tabulated percentages of the component parts of a piece of iron or steel resulted largely from the fact that we knew so little what knowledge was needed for a clear and satisfactory explanation of observed phenomena. From this over-confidence in the power of the chemist to explain everything, there has been a natural, and doubtless wholesome, reaction. Experience has shown that, great as the value of a knowledge of the chemical composition of a piece of metal may be, it is, after all, only a part of the knowledge we need before we can determine with what we are dealing.

To some extent coincident with this rapid progress of chemical investigation, and within even a shorter period, we have seen the development of the physical test, with the aid of appliances which have attained marvellous perfection in surprisingly few years. Thos. Tredgold, in his Strength of Cast Iron, published in 1823, says—"Lord Bacon's idea of a mechanical history, which Diderot attempted to realise, is not so well calculated to fulfill his own views (concerning the advancement of the arts) as a well directed course of experiments on the nature, forms, and advantages of materials."

Coulomb, in 1784, made some important experiments on torsion, and was probably among the first to study the effect of continued stress upon the elastic limit of iron and steel. In 1818 Wilson estimated the power required to crush cast-iron at 2,240,000 lbs. to the cubic inch. Reynolds, quoted by Wilson, recorded an experiment in which a cube of cast-iron ½ in. square required 448,000 lbs. to crush it. Tredgold considered it necessary to correct these erroneous estimates, and made numerous experiments with cast-iron, testing specimens by static loads and under a drop. It is within a century that the work of Navier, Perronet, Poleni, Telford, Brunnel, and others furnished the basis for a more or less exact knowledge of some of the more easily recognised and described physical properties of iron and steel. Naturally the results reached by these experiments were as incomplete, and in many instances as mistaken, as their methods and appliances were rude and unsatisfactory. Drop hammers, single-lever testing machines, and hydraulic presses were the only power appliances employed in testing during the first half of the present century. Experiments were mostly directed to ascertaining the tensile strength of materials, chiefly iron, steel, and wood, under shocks or stresses which, at a single application, would produce rupture. The breaking point thus ascertained was termed the ultimate strength of the material; and until very recently the data thus gathered were the only bases for calculating the dimensions of members which were expected to resist tension. Resistance to compression was similarly determined by the application of crushing loads to cubes of unit dimensions; and this was deemed satisfactory until the experiments of Hodgkinson demonstrated the previously unrecognised influence upon resistance to compression of the ratio of diameter to length in test specimens.

The period from 1850 to 1875 was, without doubt, the most fruitful in additions to our knowledge of the physical properties of iron and steel as revealed by the testing machine. It comprised the investigations of Navier, Fairbairn, Woehler, Spangenberg, Kirkaldy and Thurston. The work of these and other investigators brought the physical laboratory, fully abreast with the chemical laboratory and each has given to work done in the other a value it would not otherwise have possessed. Chemistry has its limitations—not quite sharply defined perhaps, but still evident. If the chemist should ever succeed in giving us a report showing the exact proportion of each constituent of a piece of metal beyond question or doubt, we might still be in the work before us where the builder is when he stands among the bricks and lumber and the sundry materials he makes use of in construction. It he knew nothing more than the count and tally of his materials he could build nothing. Nor is the testing machine infallible. What it shows is to a greater or less extent dependent upon what the operator seeks to have it show. We all know how, on the one hand, by sudden shock applied to a specimen under stress, it can be made to give results far below any recognised standard; and how, on the other hand, by gentle increments of stress through lengthening intervals of time, a piece of metal may be coaxed to show test results far above its real value, and apparently inconsistent with its chemical composition. To harmonise what seem to be the often-conflicting results of chemical analysis and physical tests, we must seek for a knowledge of causes affecting quality in yet other directions. In this we have already had assistance of the greatest value. The anomalies developed by the steels made by different formulæ, and of samples of a given composition taken at different stages in the process of manufacture, have called attention to the fact that the quality of steel does not alone depend upon what it is made of.

It is important to know the chemical composition of muck bar and ingot, but experiment and experience have shown that the beam, the rail, the ship plate and the bridge member, on which the safety of the whole structure may depend, may be so far below the standard of quality which analysis would lead us to expect, or physical tests of specimens taken at intermediate stages in the processes of manufacture warrant us in assuming, that we must seek still further light on the subject in the revelations of microscopic analysis.

In the microscope we have an instrument which promises to supplement the laboratory and the testing machine, to harmonise their seemingly conflicting records, and to detect the influence of shop treatment at every step in the process of manufacture. The work of the microscopists who have thus far turned their attention to iron and steel has not been complete enough as yet to give us more than a few standards by which to compare our observations; but I do not doubt that within a very few years the microscope will give the laboratory and the testing machine a value for the ironmaster, the steel-maker, and the engineer incomparably greater than that they now possess.

This branch of special investigation is one which offers many attractions for the conscientious student who will approach it in the earnest spirit of scientific enquiry. Within the little circle of the field of a microscope there is more to be learned of value to science and the arts than the chemist can predict or the physicist explain. It will bring us to the point beyond which no investigation can proceed. Then, as now, we shall realise that "the utmost still is hid;" but when we shall have learned all it is possible to learn from the revelations of the microscope we shall have followed truth to the limit of human intelligence, and shall have seen it fade into infinite mystery. Meanwhile, let us remember how new is our knowledge of iron and steel, how incomplete and how dependent is the student by one method upon the knowledge gained by other methods, some as yet almost untried. It is too soon for broad generalisations. The key to the mystery seems to lie in the structure of the metal, and until we know more of this, and can reason from effect to cause through the known phenomena of analysis and test we may safely distrust that assurance of conviction and positiveness of utterance which Tyndall tells us are ever characteristic of "the confidence of half knowledge.

NEW PATENT CONVENTION.

The text (as slightly abbreviated by Messrs. THOMPSON and BOULT, patent agents, High Holborn) of the Convention agreed to by the Union of States for the Protection of Industrial Property is subjoined, and will be of general interest:—

ART. I.—The Governments of Belgium, Brazil, France, Great Britain, Guatemala, Holland, Italy, Portugal, Salvador, Servia, Spain, and Switzerland, constitute themselves into a Union for the Protection of Industrial Property. The words "industrial property" are to be understood in their broadest sense; they are not to apply simply to industrial products property so called, but also to agricultural products (wines, corn, fruits, cattle, &c.); and to mineral products employed in commerce (mineral waters, &c.).

ART. II.—The subjects or citizens, or each of the contracting States shall in all the other States of the Union, as regards patents, industrial designs or models, trade marks, and trade names, enjoy the advantages that their respective laws now grant, or shall hereafter grant to their own subjects or citizens. Consequently, they shall have the same protection as the latter, and the same legal remedy against any infringement of their rights, provided they observe the formalities and conditions imposed on subjects or citizens by the internal legislation of each State.

ART. III.—Subjects or citizens of States not forming part of the Union who are domiciled or have industrial or commercial establishments in the territory of any of the States of the Union, shall be assimilated to the subjects or citizens of the contracting States. Any colony or dependency of Great Britain shall have power to join the Union by notifying their adhesion to it through the British Government.

ART. IV.—Any person who has duly applied for a patent, industrial design or model, or trade mark, in one of the contracting States shall enjoy, as regards registration in the other States, and reserving the rights of third parties, a right of priority during the periods hereinafter stated. Consequently subsequent registration in any of the other States of the Union before expiry of these periods shall not be invalidated through any acts accomplished in the interval, either, for instance, by another registration, by publication of the invention, or by the working of it by a third party, by the sale of copies of the design or model, or by use of the trade mark. The above-mentioned terms of priority shall be six months for patents and three months for industrial designs and models and trade marks. A month longer is allowed for countries beyond sea.

ART. V.—The introduction of the patentee into the country where the patent has been granted of objects manufactured in any of the States of the Union shall not entail forfeiture. Nevertheless, the patentee shall remain bound to work his patent in conformity with the laws of the country into which he introduces the patented objects.—Note: In regard to this article the Chamber of Commerce at Paris has received the following communication from the French Minister of Commerce.—"I have the honour to inform you that dating from the exchange of ratifications, the article 32, No. 3, of the French law of July 5, 1844, will no longer apply to the subjects of the contracting States, the importation into France by a subject of one of these States of objects similar to those protected under the French patent, and manufactured in any one of the countries of the Union, will not entail forfeiture of the patent. No ministerial permission will be required for such introduction.—Receive, &c. The Minister of Commerce, for the Minister and by authorisation—the Councillor of State, Director of Home Trade.—GIRARD." Englishmen (as a British firm) can, therefore, now import into France any models or specimens of patented articles without in any way injuring their patent rights.

ART. VI.—Every trade mark duly registered in the country of origin shall be admitted for registration, and protected in the form originally registered in all the other countries of the Union. That country shall be deemed the country of origin where the applicant has his chief seat of business. If his chief seat of business is not situated in one of the countries of the Union the country to which the applicant belongs shall be deemed the country of origin. Registration may be refused if the object for which it is solicited is considered contrary to morality or public order. Armorial bearings can be considered contrary to public order.

ART. VII.—The nature of the goods on which the trade mark is to be used can in no case be an obstacle to the registration of the trade mark.

ART. VIII.—A trade name shall be protected in all the countries of the Union, without necessity of registration, whether it form part or not of a trade mark.

ART. IX.—All goods illegally bearing a trade mark or trade name may be seized on importation into those States of the Union where this mark or name has a right to legal protection. The seizure shall be effected at the request of either the proper public department or of the interested party, pursuant to the internal legislation of each country.

ART. X.—The provisions of the preceding article shall apply to all goods falsely bearing the name of any locality as indication of the place of origin, when such indication is associated with a trade name of a fictitious character, or assumed with a fraudulent intention. Any manufacturer of or trader in such goods, established in the locality falsely designated as the place of origin, shall be deemed an interested party.

ART. XI.—The high contracting parties agree to grant temporary protection to patentable inventions, to industrial designs or models, and trade-marks, for articles exhibited at official or officially recognised International Exhibitions.

ART. XII.—Each of the high contracting parties agree to establish a special Government Department for industrial property, and a central office for communication to the public of patents, industrial designs or models, and trade marks, and where practicable the publication in each State of a periodical official paper.

ART. XIII.—An international office shall be organised under the name of Bureau International de l'Union pour la Protection de la Propriété Industrielle (International Office of the Union for the Protection of Industrial Property). This office, the expense of which shall be defrayed by the Governments of all the contracting States, shall be placed under the high authority of the Central Administration of the Swiss Confederation, and shall work under its supervision. Its functions shall be determined by agreement between the States of the Union; expenses to be defrayed in following proportions. France, Great Britain, and Italy, 25 shares each; Spain, 20 shares; Belgium, Brazil, Portugal, Switzerland, 15 shares each; Holland, 10 shares; Servia, five shares; Guatemala and Salvador, three shares each. French shall be the official language of the Union. A periodical paper will be published by the International Bureau.

ART. XVI.—States which have not taken part in the present Convention shall be permitted to adhere to it at their request. Such adhesion shall be notified officially through the diplomatic channel to the Government of the Swiss Confederation, and by the latter to all the others. It shall imply complete accession to all the clauses, and admission to all the advantages stipulated by the present Convention.

ART. XVII.—The present Convention shall come into operation one month after the exchange of ratifications, and shall remain in force for an unlimited time, till the expiry of one year from the date of its denunciation. This denunciation shall be addressed to the Government commissioned to receive adhesions. It shall only affect the denouncing State, the Convention remaining in operation as regards the other contracting parties.

The remaining articles relate to political routine and the like.

SCOTCH PIG-IRON WARRANT MARKET.

Mr. W. WILSON (Glasgow, June 26) writes:—The warrant market has been more active of late, owing to opinions becoming more divided. The prevailing opinion for a couple of years has been that prices must recede while the shrinkage of trade continued. Now, however, that the price has come so extremely low and the restriction of production has brought supply and demand into more just relations, operators for a fall are cautious, and there has been some covering in of oversales. Shipments are fair for the week, but are again under the figures of last year. There is no change in the number of furnaces blowing: 600 tons were taken out of store here last week, while 182 tons were taken out at Middlesborough. Business was done during the past week at the following prompt cash prices:—

Thursday, June 19.	Friday, June 20.	Monday, June 23.
41/4½, 41/5½, 41/4½, 41/5 ...	41/4½, 41/3, 41/6½ ...	41/5, 41/7, 41/4½
Tuesday, June 24.	Wednesday, June 25.	Thursday, June 26.
41/4, 41/5 ...	41/5, 41/5½, 41/3½ ...	41/3, 41/4, 41/3

	1884.	1883.	1882.	1881.
Price of Scotch Warrants, June 23 ...	41/6 ...	47/1½ ...	48/11 ...	47/3
Furnaces in blast in Scotland do. ...	95 ...	114 ...	103 ...	120
Iron in store at this date	589,387 ...	584,337 ..	636,866 ...	565,714
Shipments of Scotch pig-iron for week ending June 21	12,731 ...	14,347 ...	10,147 ...	10,977
Do. since beginning of year.....	273,189 ...	301,473 ...	239,702 ...	263,199
Price of Middlesbro', No. 3, June 23	37/ ...	39/1 ...	43/6 ...	37/
Furnaces in blast Middlesbro' dist.	100 ...	118 ...	119 ...	119
Middlesbro' Iron Imported at Grangemouth, week ending June 21	6,740 ...	4,102 ...	2,570 ...	6,307
Do. do. since beginning of year	127,990 ...	131,634 ...	107,092 ...	146,773

IRISH MINES—SOUTH BEREHAVEN.—It is gratifying to learn that this mine is being developed in a satisfactory manner, deposits of copper ore having been discovered in driving the adit level into a hill 1200 ft. high, yielding from 35 to 49 per cent. of pure copper. The last report states—"We are sinking a new shaft to communicate with the adit level, which we calculate will be done in a month. This will cause good ventilation and facilitate the stoping of the oreground, and speedy discharge of the stuff. The ore floors and dressing appliances are being completed as fast as possible; also offices, store houses, and laboratory." We are pleased to hear of the success of Irish mines, and feel assured no better field could be found for the *bona fide* investment of capital. The South Berehaven Mining Company has a capital of 25,000*l.* in shares of 10*l.* each, and it appears that the whole of the amount has been subscribed by wealthy capitalists without going before the public, or issuing a single advertisement.

LONDON CITY GUILDS—COMPANY OF TIN-PLATE WORKERS.—At a special court on Wednesday the Marquis of Lorne was admitted to the freedom of the guild, and subsequently entertained at a livery banquet, the Master, Mr. Joseph E. Turner, presiding upon each occasion. Amongst the guests present at the dinner were the Masters of the Cutlers', the Turners', and the Curriers' Companies, Mr. C. S. Hardy, M.P., Major Florence, Capt. Brand, Mr. Murphy, Q.C., and Mr. J. T. Crossley, Q.C. The toast of the evening was proposed by Mr. Assistant Low, J.P., a Past Master, who observed that the Company of Tin-plate Workers originated in the reign of Charles II., and, after obtaining a charter, occupied for some time a leading position amongst the City guilds. Recently the membership had fallen off; but efforts were now being made to resuscitate the company upon an extended basis, and the aspect of the room that evening rendered it perfectly clear that those efforts had not been unsuccessful. The company occupies the happy position of not caring for the report of the City Guilds Commission, or for any other action that might arise thereupon, for they had nothing for them to take. There were certain charitable trusts under the control of the company which were administered conscientiously, and not one penny of the funds went to provide for the expenses of the guild dinners. Within the last few hours they had admitted as a junior member of the livery a nobleman who, by his skilful administration of Canada, had won golden opinions throughout the Dominion, and whose rule would be regarded as a red letter day for ages to come. He asked them to drink the health of the Marquis of Lorne and Prosperity to the Tin-plate Workers Company.—The Marquis of Lorne, in responding to the toast, said he had taken the oath which admitted him to the freedom of the company with some fear and trembling, for it enjoined him, under many pains and penalties, to preserve the rights and privileges of the guild to which he had now the honour to belong, and he had some misgivings as to whether the adoption of this pledge would not interfere with his future political prospects. However, he did not believe there would be any occasion for repentance. The company was at present employed in a very useful work in bringing together the employer and the production of the artisan. It was also a learned company, for when Lord Beaconsfield introduced his famous reference to the Straits of Malacca, while some were amused at, and others derided the enigmatical utterance, it was left to a member of their guild, Earl Sydney, to explain that from this region the tin-plate workers obtained the very best tin in the world, not even excepting that derived from the Prince of Wales's Duchy of Cornwall.

REPORT FROM CORNWALL.

June 26.—As we have now fairly turned Midsummer, improvement, if it is at all impending, may be looked for speedily. The fact that there are no immediate signs of activity has very little to do with the forecast, one way or the other, for business has been so limited of late that a comparatively small addition would make a considerable change and might affect prices much more largely than, if we looked to extent alone, circumstances would justify. The really encouraging fact is the condition of the tin-plate market, and that is one of those things that must tell.

Are we in for a round of improvements in the look of the mines? We have often pointed out how curiously it often happens that discovery in one direction is followed by discovery in another, and now Tincroft is reported to have followed the Dolcoath lead, The Dolcoath discovery at Wheal Harriett is evidently a most remarkable one, for it is even better than the glowing rumours that were at first circulated, and there is no doubt that the new lode is one of the best ever opened up in the county. And yet there have been some very remarkable ones, which contrast very strongly with the ordinary run of the tinstuff, out of which at the present day the mines have to make their living and profits so far as we are aware. St. Agnes has hitherto proved the richest district for quality of ore, for Polberro, in the last meeting, is recorded to have sent blocks of tin-ore of half-a-ton weight direct to the smelting house without the need of stamping or dressing, which yielded 11½ lbs. of white tin for every 20 lbs. of the stuff. The Wheal Harriet lode is said to return about 25 per cent., but we shall have more exact details by-and-bye. Meanwhile there is no fear of exaggerating the importance of the discovery.

It is the fate of some people to be always ahead of their times, and of others to be always behind them; and that is the reason, we presume, why Mr. Quick should have indulged in such a vigorous assault the other day at Levant, on mechanical boring. It is really idle now, after all that has happened, to discuss the relative advantages and disadvantages of the rock-borer. Most people are satisfied that mining would have been nowhere in the county if the borer and its concomitants had not been introduced; and the only point that is really open to discussion is the wisdom of the way in which it has been applied. The use of a borer in itself will not make or mar a mine; but, like all other tools, it has to be dealt with sensibly. That is all; and it is of no use blaming the borer for the faults or mistakes of those who have employed it. Such criticisms, however, do little direct harm, and the subject is not worth pursuing further; in fact, the only harm that they can do is in the maintenance of the old notion that Cornishmen do not believe in anything that is new; an accusation which was true once, but the truth of which is fast dying out.

It has been suggested that an effort be made to start a movement in the county for the establishment of a college of mines, in which, we presume, existing organisations would merge; but whether the proposal will be taken up or can be carried to success remains to be seen. The time is not a very encouraging one.

By the death of Mr. Richard Davey, of Bochym, Cornwall has lost one of the very last of its links with the olden flourishing days of mining enterprise. No man was more respected than he, whether in private business life, or in the discharge of his duties as M.P. for West Cornwall. We hope to refer more in detail to his career next week than is possible at present, but this immediate tribute to his memory cannot be passed by.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

June 26.—Trade generally in Derbyshire has in no way improved, and as regards one or two branches it has of late become rather worse. In Derby itself considerable changes have taken place of late years, and the population has been greatly increased by the Midland Railway plant and in new iron industries as well. At the former the machinery and appliances are something worth looking at, and during the early part of the week a visit was paid to the works by a number of French engineers, who were of course much pleased with what they saw. Writing of the Midland Railway it may be stated that the officials are about to invite Sir J. Allport, their late respected head, to a banquet to commemorate the dignity which her Majesty was pleased to confer upon him. There appears to be increased activity at the works at Codnor Park and Butterley, and as the Messrs. Wight, who lately put down a new rolling mill, raise their own ironstone and coal, they should be in a position to compete with any firm or company at home or abroad. The firm at one time held the leading position for the making of girders, and produced some of the largest, if not the very largest, that were ever made. Of late years, however, the Belgian makers have been our successful competitors both at home and abroad, but there is no doubt that the owners of Butterley and Codnor Park are now in a position to hold their own, even as regards girders with the Belgian or other manufacturers. Several of the foundries in Derbyshire are now doing a fair business, especially in pipes, for while the Staveley Clay Cross, and other companies have a most extensive connection in lighter castings, however, the business doing is of a rather moderate character.

Several of the collieries in the Chesterfield district, as well as others along the Erewash Valley, are not working as well as they did even a few weeks ago. The men consider themselves well off with four days' work a week, and even the Clay Cross, with its vast connection in London and other parts of England, has found it necessary to give notice to a number of their miners that their services will be dispensed with owing to the slackness of trade. The tonnage of coal going to London is of a seasonable character; but the comparatively limited demand has led to prices coming down to a point that cannot leave a profit after the many items connected with the transport and delivery are deducted. Some of the coal sent to the Metropolis is delivered as low as 18s. per ton, and this cannot leave more than 6s. per ton for the colliery owner, a sum which will at least be absorbed in wages, rent, and material. A comparatively moderate tonnage of steam coal finds it way to the Metropolis, and although at most of our sea ports it realises more than the house coal, yet that sent from Derbyshire has been delivered by contract in London as low as 17s. per ton. There are, however, some good contracts with some of the railway companies, and as the coal has not far to go, but is taken by the trucks of the consignees, there is, of course, some margin of profit left.

But these contracts, it may be said, are keenly competed for; so that, after all, they are not so valuable as might be expected. A good deal of hard or steam coal is also consumed in the production of pig-iron; but, as little more than about one-half of the furnaces in Derbyshire are in blast, this, of course, makes a great difference in the consumption. Gas coal continues quiet, and there is still but a moderate demand for engine fuel, especially for the works in Cheshire and Lancashire, which are nearer to some of the collieries in the West Riding than they are to those in Derbyshire. This will be obviated when the new line of railway is carried out, and the distance by railway from the coal mining districts of Derbyshire to Manchester will be greatly reduced. What coke is made in the county meets with a ready sale, as would a great deal more, seeing that a large quantity is imported from South Yorkshire for the smelting of iron.

Trade in Sheffield has not changed much of late, although it must be admitted that some few branches are rather better off than they were. As yet, however, there has been no improvement as regards business with America, but some of our colonies are showing to more advantage, and orders for certain specialities may now be expected to come more freely to hand. At the Atlas and Cyclops Works there is still the same activity as regards armour-plates, but in other descriptions of mill material no change worth speaking of has taken place; but it may be said that the demand for ordinary forgings has not declined. Ship and boiler plates are in moderate request, whilst considerable orders are held for wire, so that the mills are kept fairly going.

No falling off has taken place in the make of Bessemer steel, although considerably less is now required for rails than was formerly the case, but a good deal is used in the production of some kinds of cutlery and tools. Crucible steel has gone off tolerably well, but the power of the makers is far from being fully tested. This is more especially the case with respect to plates, in which not so much is being done for shipbuilders; but the quietness may be looked upon as only temporary, for there is no doubt that steel will supersede iron for shipbuilding, seeing that engineers are agreed that it is the cheapest material in the long run, although rather more costly at starting. A large quantity of crucible steel is also being used in the casting of wheels, whole and in sections, colliery owners being among the best customers. In ordinary cutlery, such as table, pocket, and pen knives, only a moderate all-round business is the rule, the leading houses engaged in the finest descriptions of work being the best off. In large knives for machines, and for various kinds of field work abroad, there is a steady demand. This is also the case with respect to light agricultural and horticultural implements, this being the busy season for them. The sheep-shears works are now doing well, a good deal of what is turned out being for exportation. In the ordinary edge tool branches some of the houses are tolerably well off, while others are not doing so much. File makers are working steadily, and there is every prospect, with the Government and other orders now in hand, that they will continue to do so. The engine-works continue to be steadily employed, and in connection with them some heavy castings have been turned out in connection with marine fittings. In ordinary foundry material, including gas and water pipes, palisadings, kitchen and cooking ranges, stoves, grates, and builders' castings, business recently has become rather more active.

The strike at the Elsecar Ironworks, after lasting nine weeks, has just been brought to a close. It was not a question of wages, but related to the iron given out to puddling. Some of this broke short, and as it was not in a fit state for working in that condition, the men were not paid for it. This payment they struck for; but have resumed work on the old terms. The proposed amalgamation of the Chesterfield and Derbyshire Institute of Engineers with the Midland, having its head-quarters at Barnsley, has been strongly opposed at Chesterfield. The Derbyshire body did a great deal in raising money towards the erection of the Stephenson Memorial Hall, on which there is still a heavy debt; but guaranteed by several gentlemen. On Monday a special meeting of the Chesterfield Town Council was held on the subject, and a resolution was agreed to, requesting the engineers not to abandon the town and the Stephenson Hall. On the same day a meeting of the guarantors of the latter was also held, when Mr. J. S. Smith, the managing director of the Sheepbridge Coal and Iron Company, said if the proposal were carried out it would be one of the grossest breaches of faith that could be committed by any public or private body.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

June 26.—The Iron Trade does not exhibit increased activity on the week. One cause is probably to be found in the circumstance that the Quarterly Meeting will come off in a fortnight's time. Purchasers are not desirous of placing orders of much value until they are fully aware what course prices may take at these gatherings. This remark applies alike to pig and finished iron. It sometimes happens that considerable sales of pigs take place in the fortnight preceding the Quarterly Meetings, but it does not appear likely that this feature will be manifest on the present occasion. Certainly this week's markets give out little indication of it. The prices of native pigs are without change upon those of a week ago. Northampton pigs are 42s. 3d. upwards, and Derbyshires 42s. 9d. upwards. Hematites are in actual sales about 56s. 6d. Best bars are 7*l.* 10s. to 7*l.*; common hoops, 6*l.* 5s. to 6*l.* 10s.; gas strip, 5*l.* 15s. upwards; and sheets (singles), 7*l.*

In the Coal Trade interest is now centred in what now appears to be an almost unavoidable strike. The men at meetings which have been held since last week in various parts of the district have passed resolutions refusing to accept the notices given by the masters, on the ground that they are illegal, since instead of having been served in the middle of the week they should have been served on the regular pay day. They further contend that no real benefit would result to the market from a reduction in wages, because the masters profess that they will make no change in selling prices. The principal evils from which the trade is at present suffering are, according to the colliers' leaders, selling coal for slack, overweight, and underselling. The masters say they are determined to enforce the reduction.

A large meeting of coalmasters was held to-day (Thursday) in Birmingham—Mr. Cochrane, Chairman of the Association, presiding—at which it was unanimously resolved that the colliers be not allowed to resume work after Saturday excepting upon the terms of Mr. Rowland's award. The meeting recognised the principle of subsidising firms who may be compelled to pump water. Mr. Fisher Smith wrote stating he was in full accord with the action of the meeting.

Messrs. John and George Dunn, of Netherton, have taken out summonses, returnable on Monday, at the Dudley Police Court, against 12 of their workmen who have struck work. The men allege that the stint at Messrs. Dunn's pit is much larger than at the neighbouring collieries. Messrs. Dunn deny that the stint has been altered for some considerable time, and state that had the men continued work they would not have attempted to enforce the reduction in wages authorised by the award of the President of the Wages Board.

REPORT FROM LANCASHIRE.

June 26.—The Coal Trade throughout this district continues extremely quiet, with the prospect of a very dull trade for the next two or three months. The demand for house-fire coals has now dropped down to the lowest possible summer requirements, and although the lessened quantity of round coal being screened will no doubt tend to harden prices for slack, the actual demand for all classes of fuel for ironmaking, steam, and general trade purposes promises only to be moderate. Finished ironworks are either going on short time or being stopped, the blowing-out of furnaces is under consideration, and in the engineering branches of industry trade is slackening off. It will, therefore, be seen that in the chief coal using industries the prospects are rather of lessening than of increasing consumption. The present demand for coal is not more than sufficient to keep pits going about three days a week, and where more time is being worked stocks are being put down. So far as pit prices are concerned they are already so low as scarcely to admit of any further reduction.

Nominally the quoted rates are being maintained, but there is so much coal held under load offering in the market, for which sellers are prepared to take very low figures, that the basis of the prices upon which the bulk of the trade is being done has comparatively little reference to what are termed the list rates, and buyers who are prepared to take quantities for prompt delivery are in many cases able to practically fix their own prices. In a few exceptional cases some slight modifications of pit and wharf prices are being made with the close of the month, but these will not materially affect quoted pit prices generally, the only actually announced reduction of any moment being in the delivered rates for the Manchester and Salford district, which are being reduced 10d. per ton on all classes of round coal and 5d. per ton on burgy and slack. The average price at the pit mouth are about as under:—Best Wigan Arley, 8s. 6d. to 9s.; common, 7s.; Pemberton Four-foot, 6s. 6d. to 7s.; common house fire coal, 5s. 6d. to 6s.; steam and forge coal, 5s. to 5s. 6d.; burgy, 4s, 6d.; best slack, 4s. to 4s. 3d.; and ordinary qualities 3s. 3d. to 3s. 9d. per ton.

The Shipping Trade is only moderate, with very low prices ruling, Lancashire steam coal, delivered at the High Level, Liverpool, or the Garston Docks, being offered at about 7s. per ton.

Definite action has now been decided upon with regard to the wages question in the South-West Lancashire district, and next week notices will be posted for a reduction of 10 per cent.

Throughout the Iron Trade a very depressed tone continues, with the absence of any encouraging feature in the future upon which to base any anticipation of improvement. With the exception that a tolerably firm tone is maintained in outside brands of pig-iron, such as Scotch and Middlesborough, weakness characterises the market all through, and both in pig and finished iron the demand has again been extremely dull during the past week. Lancashire pig-iron makers still quote 43s., less 2½ for forge and foundry, delivered equal to Manchester, but they are undersold by district brands, Lincolnshire iron competing in this market at very low figures, averaging about 42s. to 42s. 6d., less 2½ delivered here, with in some cases less than this being taken, and Derbyshire brands are also to be bought at low prices.

The finished iron trade is in a very depressed condition. The demand for home consumption continues extremely small, and the shipping season so far has been exceptionally dull, a considerable portion of the trade usually done in this district having apparently been secured by makers in Scotland. For good qualities of bars delivered into this district 5*l.* 15s. remains nominally the quoted price, but makers are open to offers at less, and common bars could be bought readily at 5*l.* 12s. 6d. per ton.

Engineers in most cases are still being kept fairly well employed, but to a large extent they are simply kept going finishing old contracts, with very little new work coming in.

TRADE OF THE TYNE AND WEAR.

June 26.—There is still a good demand for best Northumberland steam coal, and late prices are well maintained. Best are 9s. 6d. per ton; second quality, 9s. per ton f.o.b. A great rush for steam coal of all kinds is expected, as large quantities are required at the Russian Baltic ports before the coal tax comes into operation early next month. The shipments of this coal continue to increase at Blyth, and it is now evident that some of the principal colliery owners intend to ship most of their produce at that port, at all events so long as the weather is favourable. Of course in winter shipments cannot be carried out there so regularly as at the Tyne and Wear ports. There is also a good demand for steam small coal. Gas coal is shipped on fair quantities for the time of year at late prices, which range from 6s. 6d. to 7s. 6d. per ton. The demand for Wallsend also continues fair at late rates. The inland demand for coke is not satisfactory, and until a revival of the iron trade occurs no improvement in the trade can be expected. The export trade in coke, although considerable, has also been rather disappointing this season so far. Large shipments of patent fuel has been made from Sunderland lately for the Baltic and other foreign stations. Most of the manufacturers of fire-bricks and other fire-clay goods are well employed, and considerable shipments of these goods foreign and coastwise have been made of late. The make of fire-bricks, sanitary pipes, &c., on these rivers are now very large, and this is certainly one of the most healthy trades in this district at present. Large quantities of Portland cement and other goods of that description also continue to be manufactured here, and the demand for shipment, coastwise and foreign, has been large of late.

The Thornley, Ludworth and Wheatley Hill Collieries, together with the colliery plant of pits, engine-houses, engines, boilers, machinery, railways, coke-ovens, rick yard and gasworks, agent's and workmen's houses, cottages, workshops, stabling, and other erections and buildings were offered for sale by public auction at the Central Station Hotel, Newcastle, on Saturday, by Mr. Davison. There was a large attendance of capitalists, colliery owners, viewers, and others. The auctioneer said that the whole property embraced an area of 92,080 acres. The collieries are situated in the best part of the Durham coal field, near to the Hartlepool Docks, and within easy reach of the Wear and Tyne shipping ports, and in close proximity to the iron field of the Cleveland district. There are five seams of workable coal, some of them producing the far-famed Wallsend house coal, and others good coking and steam coal. With regard to quantity, sufficient coal remains to turn out 250,000 tons per annum for the next fifty years, and then he was told by competent authorities that the supply would not be exhausted. The leases only of the collieries were first offered in one lot, but as there was no offer the auctioneer offered the leases, royalty, and fixed and loose plant in one lot, but this also did not bring an offer. The collieries were then offered separately, but as there was again no bid, the property was withdrawn. These collieries are very important and extensive, and the undertaking is no doubt a large one, but there is little doubt that they will command attention, and it is quite possible that a sale may be effected privately at no distant date. The general trade of the district at present is certainly suffering from considerable depression, more especially the iron, the shipping, and iron shipbuilding trades, but competent authorities here hold that the levelling down process of low prices is now rapidly progressing, and as money is becoming extremely plentiful, it is held that the financial horizon is clearing, and an early improvement in general trade is expected.

The cheap working of steam vessels continues to occupy the attention of commercial men here, and great reforms have been effected in various matters, but there is still room for retrenchment. The heavy cost of marine insurance attracts special attention. It appears that in some cases one-fourth of the earnings of vessels has been paid for insurance. This is monstrous, and this orying evil will have to be dealt with in some way. A number of new steamers, some of them of large dimensions, have been launched on the Tyne this week. A very fine vessel, the Baltimore, has been launched from the new yard of Messrs. John McIntyre and Co., at Hebburn. Mr. McIntyre was long manager of the shipbuilding yard of Palmer and Co., Jarrow, and he designed the first iron screw collier built on the Tyne, the John Bowes, 32 years ago. The Baltimore is 350 ft. in length by 43 ft. beam; depth, 28 ft. 9 in.; engines, 300-horse power; cylinders, 44-in. and 82-in. respectively, with 54-in. stroke. There are 16 steam winches on the deck. The vessel is intended for trade between Baltimore and Liverpool. It will carry 700 head of cattle and 3000 tons of ordinary cargo.

A large business has been done at the Tyne Dock during the past week. The shipments of coal and coke were 114,804 tons, an increase of 25,592 tons on the quantity for the corresponding week last year. The imports were also large. The general trade of Sunderland is still depressed, but there has been a heavy shipment of coals and coke at Sunderland and Seaham during the past week, but all other industries are dull. The coal trade on the Wear is fairly brisk at present, but prices are weak.

The Iron Trade has been in a very steady and firm condition during the week, and the demand has somewhat improved. The current prices now are 37s. for No. 3, and 55s. 6d. No. 4 forge; some makers ask a little more for special brands. No. 3 iron is now becoming scarce, and some vessels have been detained lately waiting for cargoes. The large deliveries for Russia in anticipation of increased duties has greatly increased shipments. The deliveries for the week ending on Friday last were 18,494 tons, and for the first 19 days of June 47,486 tons. The finished iron trade continues in a dull state There is a prospect of still less iron being required for iron shipbuilding, and this naturally causes manufacturers to turn their attention to other channels of manufacture, and consequently hoop making has been introduced in the Stockton district. The general engineering works and locomotive works in the district are on the whole well employed. Foundries are also generally fairly employed, and there is still a large amount of bridge and miscellaneous ironworks in the district. At the great works of the Armstrong-Mitchell Company at Elswick there is much activity; there is a large amount of orders for the new patent gun carriages in hand. Prices of finished iron have not changed of late. Ship-plates are 5*l.*, boiler plates 6*l.*, sheets 6*l.* 15s., and common bars 5*l.* 5s. Messrs. Connal's stock of warrants is 58,277 tons, a reduction of 267 tons in the week.

A company has been formed for the purpose of commencing the manufacture of a very superior class of iron on the Tees. For this purpose high-class iron ore is to be brought by sea from Devon and also from Shetland. Two blast-furnaces of large dimensions are to be erected specially for the purpose, and also the necessary plant for the manufacture of high-class iron. One of the iron firms on the Tees has commenced the manufacture of cheap iron girders for use in house building, &c., and they are now competing successfully with the Belgian makers of this special article. It has been long complained that the Belgian ironfounders were supplying this country with those girders. There is some probability of an extension of the lead trade on the Tyne, and that an attempt will be made to produce white and other lead direct from the ore.

The Chemical Trade on those rivers continues to progress fairly. The value of the leading products in this business has fluctuated considerably during the past few months, but at present they are sold freely at fair rates. Soda crystals are 2*l.* 17s. 6d., and bleaching powder 7*l.* Higher rates are asked for bleaching powder by some houses. The Newcastle Chemical Company failed in their late attempt to find the salt-bed in their ground on the Tees, but another attempt is to be made to find this bed in other ground in that district.

The meeting of the Chemical Society will be held in Newcastle on July 9 and following days. The first meeting will be devoted to the general business of the society and the delivery of the President's address; in the afternoon the works of Sir W. Armstong and Co., at Elswick, are to be visited; and in the evening the annual dinner of the members will take place in the Banqueting Hall of Sir Wm. Armstrong, Jesmond Dene. On the second day the leadworks of Messrs. Locke, Blackett, and Co., at St. Anthony's, will be visited, the great works of the Newcastle Chemical Company, and Palmer's Shipbuilding and Ironworks at Jarrow; and in the evening a *conversazione* will be held (with music) in the Assembly Rooms. The third day will be devoted to an excursion down the river and an inspection of the works of Charles Jennat and Co., the Tharsis Sulphur and Copper Company, &c.

TRADE IN SOUTH WALES.

June 26.—The Steam Coal Trade remains in the same easy state. Merchants are not so much pressed with orders, more especially at Swansea, where business is very slack. However, there is not much to complain about if business maintains even its present healthy condition. The amount sent away from Cardiff last week was 144,635 tons foreign and 3246 tons patent fuel; Newport, 29,433 tons foreign; Swansea, 11,270 tons foreign and 5269 patent fuel. House coal is in little demand, but small steam coal and patent fuel are more enquired for.

The Llynvi and Tondu Coal and Iron Company have just struck the Nine-feet seam of coal in Moffat's level, on Cwrtymwnws Farm, near Maesteg, which is the company's freehold. This is pronounced to be an excellent seam. A new colliery was opened last week in the Bryn district, Monmouthshire. It consists of a large acreage of the celebrated Mynyddislwyn seam of house coal. The mineral is situated at the Place Farm, near Blackwood, and is the property of Lord Tredegar, Colonel Lyne, and others. The contract for the working has been secured by Messrs. Bevan and Price, who possess collieries in the Bargoed and Pengam districts.

The contract for supplying the reserve squadron on the coast of Ireland with coal has been secured by the Powell Duffryn Company, of Cardiff.

By the agreement between the Pontypridd, Caerphilly, and Newport Railway Company with the Taff Vale, coal will be carried to Newport at the same price as it is now carried to Cardiff. This is a boon to the former port, and the merchants there are about to give Sir George Elliott, M.P., a banquet in celebration of the event.

The Iron and Steel Trades show no improvement. Cardiff sent away 1220 tons last week, and Newport 620 tons to Gothenburg and 616 to Santos. The arrivals of iron ore at Newport were 11,106 tons from Bilbao, and 4510 tons from other places; Cardiff received 6283 tons from Bilbao, and 2320 from other places.

The Tin-plate Trade remains in the same healthy state. Charcoal-made steel plates are in active demand at from 16s. 3d. to 18s. per box; IC cokes, 15s. 6d. to 15s. 9d.; "wasters," 14s. 6d. The demand from the United States is very good.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

June 26.—The following lead mines of the Principality and Shropshire, notwithstanding the extreme depression prevailing, continue to be worked with some degree of success:—In Pembroke, the Llanfyrnach; in Cardigan, Darren, Cwmystwith, Lisburne, and Tan-yr-Alt; in Montgomery, the Van; in Shropshire, Snailbeach and Roman Gravels; in Denbigh, the Minera; in Flint, North Hendre. Of copper mines only one—Drws-y-Coed—on the mainland continues in work. The two great mines of Anglesea, Mona and Parys, work on a limited scale. A sulphur or pyrites mine up the Conway Valley seems to be working successfully. All the copper deposits of North Wales are on the same geological horizon—that is to say, contained in strata of about the same age, just above the summit of the Cambrian group, but there are differences in the ores which have not, I think, been noticed before. All are sulphides. Those of Anglesea contain about 6 to 7 per cent. of metallic copper; those of Drws-y-Coed and the north side of Snowdon 10 per cent., and both of the foregoing are for the most part free from admixture with lead. On the south side of Snowdon the copper ranges up to 18 per cent., and this is mixed with about 8 per cent. of lead and 6 per cent. of zinc. In the outcrop of the same strata in Merionethshire, the copper contained seldom ranges above 6 per cent., often less, but then the ores, as Mr. Readwin reminds us from time to time, contains an appreciable quantity of gold. It may be interesting also to note that the bluestone—the mixed ore of the Anglesea mines—occurs in a similar form in strata of the same age in Co. Wicklow.

The work of taking away the machinery from the Talargoch Lead Mines goes on without the interruption which was feared from the men.

Robert David Griffith has obtained by a jury 170*l.* compensation from the contractor for the Bangor and Bethesda Railway for the loss of a leg. The complainant was an engine-driver, and his engine went off the line in consequence, it was alleged, of the defective state of the line. The award was made on the basis of three years' wages. This is a rather important decision for railway contractors, who, of necessity are obliged to work upon incomplete railways.

The demand for slates is fairly good. At the slate port of Dinorwic 17 loaded vessels sailed last week, and 15 arrived for loading. In the slate region around the Snowdon ranges exploratory works are going forward in the slate beds corresponding to those of Festiniog. There is a little more activity in the building stone quarries. Those in the new red sandstone at Grinshill, Salop, and those in the freestones of the coal measures in Denbighshire are much better employed than they were. Although the price of iron is low the furnaces keep employed, and there is a fair demand for limestone for fluxing purposes.

The excitement caused by the reduction of 10 per cent. in the wages at the Penrhyn and Dinorwic Slate Quarries continues, and to all appearance it will do so for some time. It is reported that the Festiniog Quarries have made a reduction of 20 per cent. The fight over the Chester and Connah's Quay Railway Bill continues, the contest centring in the question of the practicability of a swing bridge over the Dee. On the Flintshire side some anticipatory works are in progress in connection with the scheme.

The passing of the Bills for the various railway schemes is looked forward to with some anxiety. It is reasonably hoped that these, with the gigantic works of the Manchester Ship Canal, will find employment for the men thrown out of work by the failure of the mining industries. The colliers keep well at work, and the trade is quite as good as it usually is at this season of the year.

CORNISH PUMPING-ENGINES.—The number of pumping-engines reported for May is 13. They have consumed 1055 tons of coal, and lifted 7·5 million tons of water 10 fms. high. The average duty of the whole is, therefore, 48,000,000 lbs. lifted 1 ft. high by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Mellanear—Gundry's 80 in.	Millions	48·3
Mellanear—76 in.		59·4
West Wheal Seton—Harvey's 85 in.		69·7

FORMS OF SILICA—COLOUR IN MINERALS.

The first paper read at the annual meeting of the Mineralogical Society of Great Britain and Ireland, held in Edinburgh, on Tuesday, was "On Forms of Silica," by Professor RUSKIN, who congratulated the society on this occasion of its meeting in the capital of a country which was itself one magnificent mineralogical specimen, reaching from Cheviot to Cape Wrath, and which concentrated into the most convenient compass, and presented, in the most distinctly instructive forms, examples of every mineralogical phenomena and process which had taken place in the construction of the world. Might he be permitted to bring before the members a question which in Edinburgh, of all cities of the world at present constructed, it should be easier to solve, and which (his father being Edinburgh born) was very early submitted to his childish mind, and had been, more or less, the occupation of his best wits ever since in vain—the production and painting of a Scotch pebble. He hoped to prevail on some Scottish mineralogist to take up the hitherto totally neglects of the relation of colour in minerals to their state of substance—why, for instance, large and well-developed quartz crystals were frequently topaz colour, a smoke colour—never rose colour—while massive quartz might be rose colour and pure white or grey, but never smoke colour. Again, why amethyst quartz might continually, as at Schemnitz and other places, be infinitely complex and multiplex in crystallisation, but never warped, while smoky quartz might be continually found warped, but never in the amethystine way multiplex. Why, again, smoky quartz and cairngorm were continually found in short crystals but never in long slender ones, while beryl was usually short and even tabular, and green beryl long almost in proportion to its purity. Might he also hope that the efforts of the Mineralogical Society might be directed to the formation of a museum of what might be called mineral geology, showing examples of all familiar minerals in association with their native rocks on a sufficiently large and intelligible scale.

Proceeding with the subject matter of his paper, Prof. Ruskin pointed out that there were at least six states of siliceous substance which were entirely distinct—flint, jasper, chalcedony, hyalite, opal, and quartz. They were only liable to be confused with each other in bad specimens; each had its own special and separate character, and needed peculiar circumstances for its production and development. After describing the distinguishing characteristics of the specimens and where they were secured, Prof. Ruskin submitted that no movement of rocks on a large scale could ever be explained until they understood rightly the formation of a quartz vein and the growth—to take the most familiar of fusible minerals—of an ice-crystal. And he would especially plead with the younger members of the society that they should quit themselves of the idea that they needed larger laboratories, fine microscopes, or rare minerals for the effective pursuit of their science. A quick eye, a candid mind, and an earnest heart were all the microscopes and laboratories which any of them needed, and with a little clay, sand, salt, and sugar, a man might find out more of the methods of geological phenomena than ever were known to Sir Charles Lyell. Of the interest and entertainment of such unpretending science he hoped the children of this generation might know more than their fathers, and that the study of the earth, which hitherto had shown them little more than the monsters of a chaotic past, might at last interpret for them the beautiful work of the creative present, and lead them day by day to find a till then unthought of loveliness in the rock, and a till then uncounted value in the gem.

In the course of the discussion which followed the reading of the paper, the Chairman (Prof. Geikie, who in the absence of the President, Prof. T. G. Bonney, performed the duties of the office) said that the whole question of the origin of these forms of silica was an extremely difficult one, and expressed his conviction that it could hardly be so easily interpreted as Prof. Ruskin imagined. Prof. Carnelley, Dundee University College, read a paper "On the Application of the Periodic Law to Mineralogy," contending that the law was not a mere fancy, but had given most important results. The next paper was "On the Origin of the Andalusite Schists of Aberdeenshire," and was prepared by Mr. John Horne, F.R.S.E., of Her Majesty's Geological Survey. Mr. Andrew Taylor, Edinburgh, in a short notice drew attention to the presence of prehnite and other zeolites in the rocks of Samson's Ribs and Salisbury Crags, in the Queen's Park. Mr. Hamilton Bell brought under the notice of the meeting a new locality for the mineral zoisite at Loch Garve, in Ross-shire.

A paper "On Diatomaceous Deposits in Scotland" was then read by Prof. Ivison Macadam, who gave a general idea of the vast extent of some of these beds, and the proportions of silica, &c., contained in them. The deposits were being worked up, he said, to yield an absorbant for dynamite manufacture, and to give a material having double the liquid-retaining power of samples of kieselguhr experimented upon. "Notes on the Albertite Beds of Strathpeffer, in Ross-shire," were communicated by Mr. William Morrison, of Dingwall Academy, and Mr. Thomas Wallace, of Inverness High School, sent a paper "On New Localities for the Minerals Strauolite and Kyanite in Glen Urquhart and Drumlach Glen, Inverness-shire." The other papers were:—"The Crystallography of Bournonite," by Mr. H. A. Miers, British Museum; "Notes on the Metallic Veins of the Upper Hartz, Germany," by Mr. H. M. Cadell; "Crystals of Tourmaline," by Prof. Solly, Cambridge; "Gold in Wales," by Mr. T. A. Readwin; and "Scottish Localities for Actinolite," by the Rev. W. W. Peyton.

In connection with the question of Gold in Wales Mr. Readwin said that he had been experimenting rather largely with the auriferous lodestuff and its enclosing silurian slate rock just at its junction with the coarse Cambrian sandstone, about 1000 feet up the Gwynfynydd, or White Mountain, in Merionethshire, ascending from the beautiful waterfall known to tourists as Pystyll-y-Cain and Rhiadr Mawddach. Recently he had made 22 trials upon 53½ tons of rocks and minerals, and extracted 44½ ounces of gold. Altogether at various times he had made 78 trials upon 72 tons from this mountain, resulting in 113½ ozs. of gold, exclusive of rich stones reserved from the treatment, holding about 20 ozs. of gold. On the motion of the Chairman, a vote of thanks was accorded to those who had prepared the different papers. Mr. Dudgeon, in moving a vote of thanks to the Chairman, commented on the absence of English members from the meeting. The Chairman also referred to their absence, which, he said, was the more surprising when they considered the fact that a better list of papers had not been presented at any previous meeting of the society than this year. This was the first meeting of the society held in Scotland, and he hoped that in the event of it being again held here English members would find it convenient to cross the Border.

THE INSTITUTION OF CIVIL ENGINEERS.—It has been the practice for some years to print at least two lists of members annually, one corrected to Jan. 2, the date of the foundation of the society, the other to June 3, the anniversary of its incorporation by Royal Charter. According to a list recently issued, it appears that there are now on the books 1438 Members, 1864 Associate Members, 510 Associates, 21 Honorary Members, and 777 Students, together 4610 of all classes. On June 19 the Council and officers entertained the President, Sir J. W. Bazalgette, C.B., at dinner at the Albion, Aldersgate-street, the other guests being Mr. F. Collingwood, M.Inst.C.E., one of the engineers of the East River Bridge, New York, and Col. Gzowski, M.Inst.C.E., A.D.C. to the Queen. The chair was occupied by Sir Frederick Bramwell, the senior Vice-President, the vice chair by Mr. Woods. There were also present Sir Charles Hutton Gregory, K.C.M.G., Messrs. Fowler, Hawksley, Harrison, Bateman, Barlow, Abernethy, and Brunlees, Past Presidents; Mr. Bruce, vice-President; Mr. Berkley, Dr. Pole, Mr. Hayter, Mr. Giles, M.P., Sir R. Rawlinson, C.B., Mr. Cowper, Sir James N. Douglass, Mr. B. Baker, Mr. Barry, Sir Edward Reed, K.C.B., M.P., Mr. Preece, Mr. C. Douglas Fox, Members of Council; Mr. H. M. Brunel, auditor; and Mr. Radcliffe, solicitor; with Messrs. Crampton, Lewis, and Shelford, members of the Committee of Management of the Benevolent Fund, Mr. Hargrove, solicitor; and Mr. James Forrest, the secretary of the Institution.

EARTHY AND OTHER MINERALS, AND MINING.

The exhaustive character and practical utility of Mr. D. C. Davies's writing has already been referred to in the *Mining Journal*, and his new volume which has just made its appearance—Treatise on Earthy and other Minerals and Mining. By D. C. DAVIES, F.G.S. London: Crosby Lockwood and Co., Stationers' Hall-court—is certainly not likely to lessen his reputation as an author upon mining subjects. The work appears to be a series of carefully and judiciously arranged notes—many of them the result of personal observation—written during a long series of years, so as to be at once readable, and in many cases useful for reference. The main divisions of the work treat of Earthy Minerals; of Haloid Minerals; of Carbon, Compounds of Carbon, and Sulphur; and of Metallic Minerals respectively, each of these being subdivided according to the requirements of the subject. In the section on earthy minerals there are chapters on silica and some of its combinations; on alumina, magnesia, lime, with some of their combinations; and on clays. Under the head of haloid minerals, Mr. Davies deals with sodium, chlorine, and chloride of sodium (in this connection there is much useful information as to the salt deposits of various countries); with nitrate of soda, borax, baryta, gypsum, fluor spar, and alum shale, and with phosphate of lime. To this latter he devotes four chapters, which, considering the attention which phosphate deposits are now receiving, especially in Canada, are likely to prove very acceptable. In passing to the third section one naturally turns to the subject of diamonds, expecting to find late information, but he does so only to be disappointed; thus we find De Beers report for 1882 advertised in the *Mining Journal* a twelvemonth since given in abstract as furnishing "much interesting information as to the cost and results of working," though in April of the present year, which is the date of the author's preface, much later facts were available to him upon these matters. The chapters on asphaltum, petroleum, and butiminous deposits generally are interesting, but have likewise the defect of not being brought to date.

The section on metallic minerals will be of considerable interest to the general reader, because it treats of less generally familiar substances—arsenic, cobalt, molybdenum, antimony, and manganese. As molybdenum is a metal about which enquires are frequently made his account of it may be utilised to give a specimen of his style. After giving the usual descriptions of molybdenum and its salts he states that in some of the Cornish copper and tin mines this mineral is occasionally met with, but scarcely in commercially paying quantities. Many years ago it was worked in the older rocks of the western part of Invernessshire; it occurred in chloritic schists. I have seen it covering the smooth joint faces of the syenitic or fine-grained granite rocks of the Mount Sorrel Quarries of Charnwood Forest. It has also been raised at Calbeck Fell, in Cumberland.

In Norway it is found associated with copper ores in the neighbourhood of Arendal, on the south coast, and in those of the long valley of Numedal, leading up from Kongsberg to the north-west. In both these localities the rock is a hornblendic gneiss. In Sweden important deposits have recently been opened and worked in the rich mineral district extending along the coast of the Baltic. I am able to describe these deposits more minutely. They occur on the island of Ekholmen (Oak Island), a little island situated in the Archipelago of Westervik, on the south-eastern part of Sweden, and about 20 miles north of the city of Westervik. The area of the island is 1,500,000 square feet. The strata of the island consist of hornblendic gneiss and micaceous rocks. Through these strata from north-west to south-east, and dipping to about 70° to the south-west, run seven distinct veins. These veins or lodes vary in width from 6 in. to 2 ft. At one point four of these veins coalesce, and form one deposit 5 ft. wide. The contents of these veins are molybdenite, molybdic ochre, and copper pyrites, with a gangue of felspar and quartz. The lodes have a known length of 270 ft., and where worked they have been proved to a depth of 30 ft. Molybdenite in a quite pure state occurs in lumps weighing up to 5 lbs. Where it occurs in smaller fragments and particles it is screened without difficulty to a state of great purity. In the summer of 1880, from June 2 to Oct. 2, three men raised from these lodes 1400 lbs. of pure molybdenite, together with about 10,000 lbs. of second molybdenum ore, having an average of 9 per cent. molybdenum, with about 5000 lbs. of unscreened ore. There is an absence in the contents of these lodes of phosphorus, wolfram, and other minerals which it is difficult to get rid of. The ore raised was sent to Germany, which is the chief market for nearly all the most valuable ores of Norway and Sweden. The prime ore realised 16s. per kilogramme (very nearly 2 lbs.), or about 25*l.* per cwt.

In Germany the mineral is found to a limited extent in the mines on the Saxon side of the Erzgebirge, imbedded in quartz and in a hard greenish marl. On the Austrian side of the same mountain range it is found at Zinnwald and Schlackenwald, in Bohemia. It occurs in quartz, which at the first place named is greasy and opaque, and at the latter place it occurs in plates in transparent quartz. In some of the mines of Hungary it is found in small rounded masses, like those of Ekholmen, which are deposited in a greyish coloured clay—very likely decomposed from the surrounding rock. These masses are composed of large shining plates, closely adhering to each other. They contain a proportion of silver ranging up to 12 per cent. of the mass. In other mines in Upper Hungary molybdenum is found associated with gold. In the United States of America it occurs at Haddam and Saybrook, in Connecticut; at Blue Hall Bay, in Maine; at Shutesbury and Burnfield, in Massachusetts; near the Franklin Furnace, New Jersey; and near Warwick, New York.

As a whole the volume is a very commendable production, and although it contains nothing particularly new or striking the fact of the information having been selected and compiled by a practical man gives it a certain value. It is concise and entertaining, and as an outline to be afterwards conveniently filled up with regard to any particular locality or any given mineral it will prove highly valuable.

NON-PHOSPHORRETTED BRITISH IRON—No. I.

In an article published in the *Mining Journal* of June 14, suggesting "How to Restore the British Iron Trade," it was remarked that the necessary preliminary steps are being taken for acquiring and developing some very attractive properties producing, among other minerals, a non-phosphurretted ferruginous mineral with a view to place upon the market a quality of iron and steel which shall ensure satisfaction whenever used. It was mentioned moreover that it is intended to form a company with an influential and practically experienced board of direction to work the Sandwick minerals in South Shetland and the South Exmouth Mine, in South Devon, which yield the character of ores adapted for the attainment of the object in view. And it was further stated that an exhaustive report upon the property had been made by Sir Francis C. Knowles, Bart., M.A., F.R.S., whose great experience as a practical metallurgist gives considerable authority to his opinion, but that a full abstract of it must be deferred. It is now proposed to give the abstract promised. The Sandwick Mines, the subject of this report, are situated on the Isthmus of Sandwick, between the Bay of Sandwick and the North Sea, opposite to the Island of Mousa, on the north-east coast of the Southern Island of Shetland.

The mines are held under a lease for the term of 50 years dating from the present year. The terms are royalties of 1-18th on sums realised for copper ore and 8d. per ton on iron ores, with a proviso that the minimum royalty shall be 300*l.* per annum, and that the royalty on iron ore for all quantities exceeding 30,000 tons in any year shall be 6d. per ton. The lands subject to this lease to be taken over and worked by the company comprise an area of about 20 square miles. There is a second lease of the minerals in the small island of Fairisle, situated between the Shetlands and the Orkneys, held on somewhat similar terms as to royalty. In both cases the veins or lodes run indefinitely under the sea. The position and the nature of the minerals contained in these mines have been reported on from time to time, and each report corroborates for the earliest the abundance and the value of those minerals, the earlier reports relating to the copper only.

Taking the general results it appears that—1. The properties contain veins or lodes of minerals throughout the whole, distinct lodes which can be opened and worked at various points. 2. The minerals are copper ore principally pyrites (a sulphide of iron and copper), partly disseminated in a mass of spongy iron ore containing in the calcined state 20 per cent. of metallic iron. Hydrated brown hematite containing when raw 54 per cent. of metallic iron and when calcined more than 60 per cent. with some peroxide of manganese suitable to the manufacture of grey Bessemer metal. A magnificent deposit of carbonate of iron and manganese or spathose iron ore (German, spath eisenstein) suitable to the manufacture of spiegeleisen, and with an appropriate addition of ferro-manganese, the latter two essential to the final stage of the Bessemer process. A description and an analysis of these valuable ores will be found in a special report below, having in view the erection of a plant of iron-works comprising blast furnaces on the largest scale suitable to the smelting and utilisation of them with spare land enough if desirable for the supplement of a Bessemer plant complete. The object to which attention is here specially invited is the extraction of the copper ores, and the income derivable from working them into the most marketable form.

In 1879, upon a survey made of these mines, it was calculated that many thousands of pounds had been expended in sinking shafts, running levels, erection of machinery, including the regulation of water supply by the formation of reservoirs and the laying of iron pipes conveying the water. This machinery is capable of crushing and dressing 20 tons of ore in 12 hours by an addition to the number of workmen's houses, by the extension of the underground workings, by the sinking of the main shaft on and equivalent shaft to a greater depth, and by a further extension of the levels. These addition have cost 5000*l.*

The work in the Sandlodge Mine has been carried on through the shafts sunk from the surface at a distance of 250 feet from each other. The west shaft is sunk on the incline of the vein to a depth of 34 fathoms through a strong shoot of gossan and hematite iron ore, and levels have been driven from the shaft at various depths, those to the north of the shaft to a distance of 200 ft. to the depth of 29 fathoms, and to the south of the shaft at 11 fathoms depth to the extent of 300 ft., and at 16 fathoms to the extent of 100 ft., the drives to the south of the shaft ending in a compact vein of spathose iron ore interspersed with spots of yellow pyrites. The greater part of the ore to the north of the shaft has been extracted as far as the levels extend, there being arches and pillars which would supply 4000 tons of spathose ore if properly worked. To the south of the shaft but little work has been done below the 16 fathom level. The east shaft is sunk vertically to a depth of 50 fathoms. The last 10 fathoms are on the point of completion, but the main pumps work on it only to a depth of 40 fathoms. Levels have been driven at a depth of 40 fathoms, north to a distance of 220 ft. and south to a distance of 190 ft., both of these being on the course of the vein, and a cross-cut has been driven west from the shaft to a distance of 84 ft., intersecting a number of feeders and reaching a good wall, along which the drive was continued northerly to a distance of 90 ft., intersecting at that point a strong lode of red spathose ore On the 50 fm. level a cross-cut 70 ft. in length has been driven connecting the main shaft with the hanging-wall of this lode and intersecting the lode, showing that at this point it has a width of 36 ft. On this level drives have been made north and south on the course of the lode 100 ft. opening out good ore ground. No work has been done on the West Pit since 1879.

The thickness of the vein varies from 9 to 14 ft., and appears to continue in depth below the present workings. Should it be required, a number of men could be employed here in getting hematite gossan and spathose ores. The East Pit contains a heavy load of spathose ore, varying in thickness from 12 to 70 ft.; through which runs a lode of copper pyrites averaging 9 to 10 ft. The work done since 1879 has been almost exclusively on this vein, and the stoping has been above the 40 fathom level. It must here be remarked that the great mass of spathose ore is free from specks of pyrites, and that even when they occur, as in the last-mentioned vein, the washings (these are free from royalty) of the ore after crushing are practically a pure spathose ore, which calcining quite secures from sulphur. (This is a great advantage compared with the foreign spathose ores, which have much interspersed pyrites.) The pure pyrites as extracted yields 25 per cent. of copper at the 50 fathom level, but becomes poorer in copper with more iron and sulphur as it comes nearer to the surface. The average ore extracted from the 40 fathom level gives 2 per cent. of copper, and it was in order to raise this to the condition of a marketable commodity that the dressing machinery was erected. Very little ore has yet been extracted below the 40 fathom level, but samples from a stope working between the 40 fathom and the 50 fathom levels show an average of 4 per cent. The waste ore from the dressings is good crushed spathose ore, containing when calcined 20 per cent. of iron, and suitable for mixing in the furnace.

It would be a most important operation, if it were practicable, to extract on the spot all the contents of this pyrites—the sulphur, the iron, and the copper, the latter as metal. It is not improbable that this pyrites (as in Spain, Portugal, and elsewhere) may contain one or both of the precious metals, but in any case by securing the copper as metal we should get a high price for it while avoiding the returning charge and converting it to profit account. The freight would then fall lightly on the metallic copper and the sulphur. The iron would be obtained as a pure oxide, which, mixed with the calcined dressings as crushed spathose ore calcined, would yield an iron ore containing from 50 to 60 per cent. of iron with a valuable flux of earthy matters.

The hematite and gossan hitherto extracted from the West Pit has cost from 1s. to 2s. the ton, to which, however, must be added a proportional charge for surface expenses and management. If the mine were worked with sufficient hands this item would be covered by 6d. a ton. Shipping costs under 1s. a ton. Freights vary from 6s. to the Firth of Forth, 8s. to ports in the North of England, and 10s. to the West of England and Wales. The prices obtained for this ore have varied according to the state of the iron market from 16s. 6d. to 32s. per ton. This ore it is intended to smelt in combination with the other ores of the mines, and with that of the South Devon Mine. The peculiar composition in lime and magnesia of the spathose ores of Sandwick will enable the smelter to dispense in great part, if not altogether, with the use of limestone as a flux (a source of great economy in the cost of the iron). From the East Pit the cost of extracting the copper ore by stoping has been sometime 5s. 6d. a ton, which price would be materially reduced when we arrange for taking out with it all the spathose ore of the vein. The cost of crushing and dressing is 1s. a ton, and the proportional expenses for surface and management might be covered by 1s. more.

GOLD AND SILVER.—Messrs. PIXLEY and ABELL (June 26) write: Gold still continues in demand for Spain and India. The Liguria brought 19,000*l.* from Sydney, principally sovereigns. The Bank has sold 50,000*l.*, in sovereigns, for Lisbon, and 8000*l.* in bar gold for India, and has received 16,000*l.*, in sovereigns, from Australia. The Thames takes 25,000*l.* to Bombay. Silver which in our last was quoted 50¼d. on Saturday, lapsed to 50⅛d., at which price the arrivals per Magellan were sold; and on Wednesday, owing to the drop of the Indian Exchanges and the low price at which Telegraphic Transfers were sold at the Bank, a further fall of ⅛d. took place to 50d., which we quote as the nearest price to-day. The Leibnitz, from Brazil, brought 4100*l.*; Germanic, from New York, 40,000*l.*; Magellan, from Chile, 30,000*l.*: total, 74,100*l.* The Thames takes 67,000*l.* to Bombay. Mexican dollars were quoted on Saturday last at 50d. nearest, and have since advanced ½d. to 50½d., but, in the absence of supplies and the uncertainty as to the amount the Royal Mail steamer, due on the 27th inst., brings, the market is very quiet. The quotations for bullion are:—Bar gold, fine, 77s. 10d. per ounce standard; bar gold, containing 20 dwts. silver, 77s. 11½d. per ounce standard; United States gold coin, 76s. 3½d. per ounce; bar silver, fine, 50½d. per oz. standard; bar silver, containing 5 grs. gold, 51d. per oz. standard; Cake silver, 54½d. per oz.; Mexican dollars, 50¼d. per oz.; Quicksilver, 5*l.* 5s. Discount, 3 per cent.

RAILWAY AND GENERAL MARKETS.—Referring to the course of business done to-day during official hours (11 to 3) Mr. Ferdinand R. Kirk Birchinlane, writes:—*Opening:* There is a further fall in American railway shares, but not of very great dimensions except in the case of Lake Shore, which are 2 down, at 72. Erics, $12⅛ to $13; Illinois, 114 to 115; Reading, 11⅝ to 12. Trunk Seconds are ⅜ lower, at 50¾; the Thirds can be bought at 22. Home railways are hardly changed with the exception of Great Eastern, now only 57 to 57⅛, Brighton, A, being 90⅜ to 90⅝. The low prices at which many mining shares are offered have attracted the attention of buyers, and, in spite of the settlement, an increased business has been done the last few days at advanced quotations. Bratsberg, 1¼ to 1⅝; Home Mines Trust, 9s. to 11s.; Old Shepherds, 10s. to 12s.; East Wheal Rose, 8s. to 10s.; Tresavean, 5s. to 7s.; Mounts Bay, 3s. to 4s.; Organos, 16s. to 18s.; Orita, 15s. to 17s.; Wheal Crebor, 1¼ to 1⅛; Colombian Hydraulic, 7s. to 9s.; Montana, 2 to 2¼. Newport Abercarn Steam Colliery are quoted 9¾ to 10¼, which includes the dividend of 10 per cent.—*Closing:* The settlement having passed off satisfactorily, prices are a little better in the home railway market, North British having improved 1¼ and Brighton, A, ⅝. Copiapo, 2⅜ to 2⅝; Panulcillo, 4¼ to 4½; Eberhardt, ⅛ to ¼; Callao Bis, 6s. 6d. to 7s. 6d.

PHŒNIX UNITED.—The meeting is to be held at the mine on Thursday next, when it is expected a favourable balance will be presented to the shareholders. Had the price of tin kept its position a dividend of 2s. 6d. a share could have been declared. The mine is looking well, and selling over 10 tons of tin weekly.

ANGLO-FRENCH MERCANTILE REVIEW.—The second number of this quarterly, which is the organ of the British Chamber of Commerce at Paris has just been issued, and contains information relating to the modified French Law of Patents, the International Patent Convention, and various other matters of interest to men of business to this country.

THE STANLEY PARK ESTATE COMPANY (Limited).—Capital 50,000*l.*, in shares of 5*l.* To acquire and develope an estate situated at Carshalton, Surrey. The subscribers are—F. T. Hall, 19, Gray's Inn-square, 60; H. Fox, 28, St. Swithin's-lane, 40; D. Harrison, Hampton Wick, 35; T. N. Ward, Wandsworth, 25; G. L. Lynch, 4, King-street, 20; W. R. Crowe, Carshalton, 20; G. Wingfield, 15A, Paternoster-row, 10.

TOLIMA MINING COMPANY.—Advices received by the mail of June 26, of which the following is an abstract:—

Frias April returns		$65,278·6
,, cost	$30,447·8	
May cost charged to April	15,000·0=	45,447·8
Showing estimated profit		$19,830·6

	Fms.	Ft.	In.
The underground report shows	49	3	10
of ground expended, of which	14	3	8
were unproductive, leaving	35	0	2

of productive ground.

The superintendent states that the invoice represents 136 tons 5 cwts. of export ore, of an average assay value of 365 ozs. of fine silver per ton. He explains that he has charged $15,000 (2500*l.*) of the expenses of the month of May to April, with the object of equalizing the monthly cost. It will be thus seen that the April profits would have been estimated at 5805*l.*, but for this precaution.

UNDERGROUND REPORT.—The chief points calling for special remark this month have reference to the Bonanza lode, the ore in which has fallen off. At the 70 we have as yet failed to prove its continuance in strength downwards. It is satisfactory to note, however, that Rogers's winze, now being sunk on the 70 beneath the west central portion of the Bonanza, after following leaders of ore of variable and fluctuating yield and quantity, has at a depth of 50 ft. under this level shown a more pronounced change for the better, and as it appears at present it will probably be from the development of the section east and west from this winze at the 80 that our more immediate expectations may be realised. The drivages west of the engine-shaft afford, however, great hopes of valuable discoveries being made in that section before very long.

ENGINE-SHAFT.—The vein in the sole is 9 ft. wide, composed of schist and quartz, the main leader being 4 ft. in length, between two polished walls, and yielding arsenical pyrites.

80 FM. EAST has been driven 18 fms. from engine-shaft. The vein is the full width of the drive—from 5 to 6 ft., and is close and hard. The lode contains strings of pyrites and spots of red silver, but not in sufficient quantities to value at sight, having fallen off somewhat in the last few feet.

80 FM. WEST.—The vein in this end is at least 6 ft. in width of quartz and schist, showing pyrites and spots of blende, but not to value. A considerable feed of water flows from the vein: driven 7 fms. from shaft.

70 FM. EAST has been extended a total distance of 67 fms. from engine-shaft. The end is following the north portion of the main lode on the eastern extension of the Bonanza workings. The vein in the end is composed of soft friable quartz and schist, bounded by two almost vertical walls, and in places is split up into a series of diverging branches of quartz, the ground also being much disordered. A further distance of 3 or 4 fms. will bring this end opposite the line of the Esperanza shaft, being sunk under the 69, principally on the south portion of the lode, and as soon as this driving is extended a cross-cut south from the 70 will be driven to intersect the whole width of the lode to the foot-wall and shaft, thus proving its entire section.

70 FM. EAST, No. 2 CROSS-CUT NORTH, has been driven nearly 5 fms. north from main level, but nothing of value has been intersected.

70 FM. EAST, No 1 CROSS-CUT NORTH, advanced 12 fathoms from main lode, where a vein 2 ft. in width, carrying a string of ore 1 in. in thickness, has been intersected.

ROGERS' WINZE has been sunk 5 ft. under the 70. A little above the sole an improvement has set in. On the footwall of the vein there is about 2 ft. in width of mixed ore and lodestuff, valued at about 30 cwts. per fathom for 2 or 3 ft. in height. The leader extends all the length of the winze, and the mineral which sets in almost horizontally appears to be forming at this depth. We trust it may be a resumption of the Bonanza ore after a temporary break downwards. This, however, remains to be proved.

70 FM. BACK STOPES EAST.—As already indicated the Bonanza stope is rapidly pinching, and the ore shows no signs of extending over the 70 further than we now see it. The productive portion of the stope is limited to a branch of mixed ore and quartz lying against the hanging-wall of the vein, from 6 in. to 8 in. in thickness, and to two or three small pockets in the east breast of the stope varying from 2 to 3 ft. in height, and from 5 to 6 in. in thickness of almost solid mineral. The remainder of the lode consists of an admixture of dark polished shale and quartz, and is quite poor. The strongest portion of lode is a section 6 ft. thick against the north wall, but unproductive. Between this and the south or footwall is a horse of almost pure schistose rock.

70 EAST; NOS. 1 AND 5 WESTERN STOPES over the 70 east ore estimated to yield from 1 to 2 tons per fathom of export ore, but a falling-off is also observable here in these.

70 WEST.—This has been driven 31 fms. from engine-shaft to date. The vein as last reported is 3 ft. wide, carrying 18 in. of mixed quartz, lead, and blende, the ore leader being 3 in. thick, and valued at 10 cwts. per fathom.

60 WEST extended 74 fms. from engine-shaft. The lode is divided into two branches, both of which are being driven upon. The north one is from 2 ft. to 4 ft. wide, composed of quartz, calcareous spar, and a light-coloured schist, carrying from 1 to 2 in. of lead, blende, and pyrites against the hanging-wall. The south branch also 3 or 4 ft. in width, and composed of lime, quartz, and schist, carries against the footwall a soft flookany leader 18 in. in width, mixed through with lead and blende ores, and letting out much water. We have great hopes of striking into productive mineral in these western drivages.

ESPERANZA SHAFT.—This shaft has been sunk 3 fms. under the 60 to date. The sole of the shaft is in the junction existing between the main lode and Welton's, or south lode at this point. The lode matter in the shaft is about 6 ft. in width of schist and quartz. The walls are well-defined, and are more vertical than previously.

RINCON'S RISE AND STOPE OVER 60 EAST.—This rise has been carried 20 ft. above the roof of the 60. The back is poor, but the eastern end carries 4 in. of rich stoping mineral, valued at from 20 to 25 cwts. per fathom.

40 WEST.—The lode in this end is 5 ft. wide between two almost vertical walls. The principal leader against the foot or south wall is 2 ft. in width, composed of quartz and schist, carrying spots of pyrites. The remaining portion of the vein is a dark-coloured slate rock, quite free from mineral. Driven 45 fms. from engine-shaft to date.

20 SOUTH-WEST.—This level has been driven 3 fms. beyond the cross-course, or about 55 fms. south-west from main level. The vein in the end is disordered and irregular in yield and bearing, but carries about 5 cwts. of ore per fathom. The air being bad we have decided to suspend this drive pending the holing of the rise and stope into the old workings sunk in former times beneath the adit, and which we trust may be accomplished before very long. The portion of the vein being risen upon with this object in view is valued at 15 cwts. per fathom of export ore. The rise is up 20 ft. from sole of 20. In consequence of bad ventilation and hardness of ground progress is slow, and only a limited number of men can work at a time.

SABANDIJA MINE: ENGINE-SHAFT.—This has been sunk 79 ft. up to date under adit. The vein in the sole is from 10 to 12 in. in width, carrying small threads of mineral, but not of saving value. The lode is hard and somewhat twitched.

12 WEST.—The end is quite poor, the vein having been disturbed by a cross-joint just penetrating by the level. As the principal branch or leader (that on which the adit winze is being sunk) is to the south of the level, we have commenced to cross-cut towards it in that direction. The end is driven 150 ft. from engine-shaft.

12 EAST.—At the date of my examination on May 16, the east end carried a leader or vein from 12 to 18 in. wide, of which about 6 in. is a half solid branch of blende, in which spots of red silver are occasionally seen. This end is driven 163 ft. from engine shaft.

WINZE UNDER ADIT.—This winze is being sunk on a vein from 12 in. to 18 in. in width, carrying a half solid leader of blende and quartz, with faces of pyrites 6 in. in thickness. The winze is sunk 19 ft. under adit, and will be continued until it communicates with the 12 fm. west; now almost driven far enough west to strike the winze.

LOWER ADIT.—Good progress is being made with this adit in the direction of the holing with the 12 east. The open-cut has been completed, and we are now going under cover.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
June 20—Minera	60	£ 6 15 6	Walker, Parker, & Co.
— ditto	60	6 13 0	Runcorn Company.
— ditto	55	6 13 6	Walker, Parker, & Co.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
June 20—Minera	52	£ 3 19 6	Vivian and Sons.
— ditto	50	3 19 6	ditto
— ditto	63	3 15 6	ditto
— ditto	60	3 15 6	ditto
— ditto	50	3 11 6	Villiers Spelter Co.
— ditto	40	3 10 6	ditto
— ditto	76	3 9 0	Vivian and Sons.
— ditto	24	3 14 0	ditto

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(MOON'S PATENT.)

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The directors having appointed Edward Joseph Carson, Esq., as a director, in the vacancy on the board caused by the death of the late Henry Adolphus Focking, Esq., such appointment will be submitted to the shareholders at the above-named meeting for confirmation.
In conformity with the Articles of Association two directors—William Bevan, Esq., and Edward Joseph Carson, Esq.—retire from office at the above meeting; but, being eligible, offer themselves for re-election.
The meeting will have to elect an auditor for the current year, and Roderick Mackay, Esq., of No. 3, Lothbury, E.C., offers himself for re-election.
The Transfer Books will be closed from the 24th June to 9th July, both days inclusive.
By order of the Board,
J. C. LEAVER, Secretary.
6, Queen-street-place, London, E.C., June 20th, 1884.

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The buyer, besides the endorsement, will receive from the vendor a letter addressed to the President of the company, stating that he has sold to N.N. the share or shares No..... ..... owned by him; the buyer will also have to communicate to the President that he has bought of N.N. the share or shares No..... and request that the transfer be registered, indicating at the same time the name of a person residing in Cuidad, Bolivar, as his representative.
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TONITE is the most efficient and economical blasting agent ever invented, and is largely in demand. It does not contain any Nitro-glycerine, and is, therefore, exempt from the dangers of exudation, or of freezing and its attendant process of thawing.

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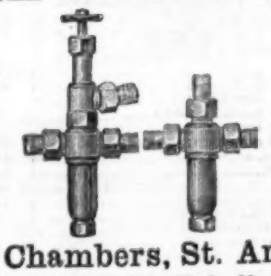

Has no moving parts

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Has the most rapid delivery.

No joints to make.

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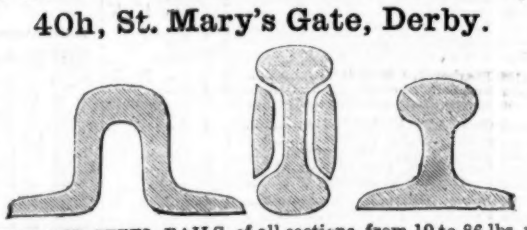

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SAFETY FUSE MANUFACTURER.

This manufacture embraces all the latest improvements for use in Blasting in Mines, Quarries, or for Submarine Purposes; and is adapted for exploding Gunpowder, Dynamite, or any other Explosive; and is made suitable for exportation to any part of the world.

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J. JACKSON, Manager

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.		Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
12000	Bedford Unlt.,* c, Tavis. (£1 liab.)..	0 14 0	1⅝...1¾	1⅝ ...	0 1 0	0 1 0	...May 1884
3200	Blue Hills †, c, St. Agnes†	● ● ●	⅛...	¼ ⅜	0 4 0	0 2 0	...May 1881
6000	Carn Brea, c, †, Illogan†§	12 12 11	2⅝... 1⅝	1⅞ ...	52 11 8	0 10 0	...Nov. 1881
4000	Craignant Bach,* l, Cardigan	5	— ...	...	0 5 0	0 3 5	0...Nov. 1882
10240	Devon Gt. Consols, c, a, Tavistock*†	1 0 0	3½... 3	3½...	118 7 0	0 6 9	...Dec. 1880
4700	Dolcoath, c, †, Camborne	16 14 10	72½ ..74	78 ...	38 6 2	1 10 0	...May 1884
6400	East Pool, †, c, Illogan	0 9 9	41 ...39	41 ...	39 15 6	0 18 0	...May 1884
12000	Great Holway,* l, Flintshire	5 0 0	— ...	...	0 12 0	0 0 7	6...Sept. 1883
15000	Great Laxey, †, Isle of Man*†	4 C 0	10 ...10	11 ...	30 3 0	0 2 5	0...May 1884
6400	Green Hurth, †, Durham*	0 6 0	5½... 5	5½...	4 16 0	0 0 5	0...Dec. 1883
9830	Gunnislake (Clitters), †, c	2 2 0	⅞... ½	¾ ...	0 19 9	0 0 2	0...Mar. 1882
2800	Isle of Man, †, Isle of Man*	25 0 0	— ...	...	83 5 0	1 0 0	0...Sept. 1880
6000	Killifreth, †, Chacewater†	4 8 6	⅜... ⅛	½ ...	0 14 6	0 0 2	0...Nov. 1883
20000	Leadhills,* †, Lanarkshire	6 0 0	1⅜... 1⅛	1¾ ...	1 5 6	0 0 3	6...Sept. 1883
400	Lisburne,* †, Cardiganshire	18 15 0	— ...	...	615 0 0	0 10 0	0...June 1883
10000	Mellanear, c, Hayle*	2 0 0	1⅛... 1¼	1½ ...	2 4 3	0 0 0	6...Jan. 1884
9000	Minera Mining Co., l, Wrexham* ...	5 0 0	6 ... 5	6 ...	69 11 6	0 0 2	0...Feb. 1884
20000	Mining Co. of Ireland, ci, c, †*	7 0 0	— ...	...	24 0 0	0 0 2	6...Jan. 1880
11829	North Hendre, †, Wales	2 10 0	— ...	...	3 18 0	0 0 4	0...Nov. 1882
8146	Ditto	1 5 0	— ...	...	0 11 3	0 0 2	0...Nov. 1882
4780	Penhalls, †, St. Agnes†	4 5 0	⅜... ¼	⅜ ...	3 17 0	0 0 1	6...Jan. 1881
12000	Phœnix United, †, c, Linkinhorne†.	6 2 9	2¼... 2	2½ ...	17 7 6	0 0 1	6...Apr. 1883
12000	Roman Gravels, †, Salop*	7 10 0	3 ... 2	2½ ...	9 11 0	0 0 5	0...May 1883
6123	South Condurrow, †, c, Camborne†...	7 5 7	9 ... 8½	9½ ...	11 1 6	0 0 6	0...Apr. 1884
9000	South Darren, †, Cardigan*	1 10 0	⅜... ⅛	⅜ ...	0 4 0	0 0 2	0...Apr. 1880
6000	Tincroft, c, †, Pool, Illogan†§	13 12 6	3½... 3	3½ ...	51 3 6	0 0 5	0...Dec. 1881
15000	Van, †, Llanidloes*	4 5 0	2¼... 1¾	2¼ ...	25 13 0	0 0 2	6...Jan. 1883
15000	West Holway,* †, Flintshire	1 0 0	— ...	...	0 1 0	0 0 1	0...Oct. 1881
6000	West Basset, c, Illogan†§	7 10 4	4½... 3½	3¾ ...	28 3 6	0 0 6	6...Apr. 1882
6000	West Kitty, †, St. Agnes	0 12 0	12 ...11¾	11¾ ...	2 9 0	0 0 10	0...Mar. 1884
6000	Wheal Agar, †, Illogan	19 6 0	16½...15½	16½ ...	0 15 0	0 0 10	0...June 1884
12000	Wheal Creber, c, Tavistock	2 4 0	1¾... 1¼	1¾ ...	1 1 3	0 0 2	6...Nov. 1883
1024	Wheal Eliza Consols, †, St. Austell..	13 0 0	— ...	...	59 C 0	0 1 0	0...Nov. 1883
6000	Wheal Grenville, †, Camborne	15 0 0	6¼... 6	6½ ...	2 0 0	0 0 2	6...June 1884
4295	Wheal Kitty, †, St. Agnes§	5 12 0	⅜... ⅜	⅜...	12 18 6	0 0 1	6...Jan. 1881
3000	Wheal Peevor, †, Redruth§	13 13 6	1¼... ¾	1 ...	8 13 6	0 0 4	0...Mar. 1881

FOREIGN DIVIDEND MINES.

35500	Alamillos, †, Spain*†	2 0 0	1¾... 1¾	1¾ ...	2 15 2	0 2 0	0...Mar. 1884
130000	Almada and Tirito Consol., s*†	1 0 0	⅝... ⅝	5/16 ...	0 6 3	0 0 1	0...May 1876
20000	Australian, c, South Australia†	7 7 6	2¾... 1½	2¾ x ret.	1 9 6	0 0 2	0...Aug. 1883
15000	Birdseye Creek, g, California*	4 0 0	1 ... 1	1⅛ ...	1 7 0	0 0 2	0...June 1884
30000	Bratsberg,* c, Norway†	2 0 0	1¾... 1¼	1¾ ...	3 4 4½	0 0 1	2½ Mar. 1884
130000	California,* g, Colorado	1 0 0	3/16... ⅛	3/16 ...	0 2 0	0 0 1	0...Aug. 1883
20000	Cape Copper Mining,*† South Africa	8 0 0	46 ...41	41 ...	57 17 6	1 10 0	0...June 1884
65000	Colorado United, s-l, Colorado*†....	5 0 0	2½... 2	2½ ...	3 14 6	0 0 1	0...May 1883
50000	Copiapo, c, Chili* (£4 shares)†	3 10 0	2¾... 2	2½xd....	2 15 3	0 0 1	0...June 1884
70000	English & Australian,*† c, S. Aust...	2 10 0	⅞... ⅝	⅞ ..	3 2 9	0 0 1	0...Mar. 1884
2000	Eng.-Aus., g, Vict.* pref. (20000 o.)	1 0 0	— ...	...	0 3 8	0 0 3	8...Apr. 1882
25000	Fortuna, †, Spain*†	2 0 0	3½... 2¾	3¼ ...	8 11 8	0 0 3	2...Mar. 1884
72000	Frontino & Bolivia, g, New Gran.*†	2 0 0	⅝... ⅜	⅝ ...	0 12 0	0 0 1	0...Dec. 1883
400000	La Plata, s-l, Leadville†	1 0 0	⅓... ¼	⅜ ...	0 6 6	0 0 7½	...Oct. 1882
6000	Linares, †, Spain*†	3 0 0	3½... 2¾	3¼ ...	19 10 4	0 3 0	0...Mar. 1884
20000	Marbella Iron Ore, *, Spain	10 0 0	2½... 2	2½ ...	9 10 0	0 0 10	0...June 1882
125164	Mason & Barry* c, Portugal	10 0 0	9¾... 8½	9 ...	3 15 0	0 0 15	0...Apr. 1884
100000	Oxford,* g, Nova Scotia	0 4 0	— ...	...	0 1 3½	0 0 1¾	...Mar. 1884
80659	Quebrada Rail., Land, & Cop. Venezuel	10 0 0	4½... 3¾	4¾ ...	6 per cent.	...	1882
50000	Panulcillo, c, Chili*†	4 0 0	4¾... 4	4½ ...	2 0 9	0 0 2	0...May 1884
25000	Pitangui,* g, Brazil (in. 6000 £1 pd).	0 10 0	— ...	...	0 1 0	0 0 1	0...Sept. 1880
1400	Pontgibaud, s-l, France†	20 0 0	8 ... 6	8 ...	30 3 1	0 11 3	...Dec. 1883
100000	Port Phillip, g, Clunes*† (£2 shares)	1 0 0	⅛... 0	⅛...	1 14 2	0 0 10	...Feb. 1881
50000	Rara Fortuna,* s, Argent. Republic.	1 0 0	— ...	...	0 3 0	0 0 1	0...July 1882
64000	Richmond Consol., s, Nevada*†	5 0 0	3⅝... 3	3⅛ ...	14 18 6	0 5 0	0...Aug. 1883
24532	Rio Tinto,*c, Mortgage Bds., Huelva.	100 C 0	...101	98	100 ...	5 per cent.	...Apr. 1884
325000	Ditto, shares	10 0 0	... 16	15	15⅝...	4 6 0	0 16 0	0...May 1884
40000	Santa Barbara,* g, Brazil	0 10 0	— ...	...	0 12 9	0 0 1	0...May 1882
122800	Schwabs Gully, d, Kimberley	10 0 0	8 ... 7½	8 ...	5 12 6	0 0 10	0...Apr. 1884
120000	Scottish-Australian Mining Co.*† ...	1 0 0	2½... 1¾	2½ ...	15 p. cent.	0 1 6	...Nov. 1883
80000	Ditto, New	0 10 0	1¾... 1¼	1½ ...	15 p. cent.	0 0 9	...Nov. 1883
22500	Sierra Buttes, g, California*†	2 0 0	1½... 1⅝	1¾ ...	2 6 6	0 0 6	6...Apr. 1884
40625	Ditto, Plumas Eureka	2 0 0	1¾... ⅞	1⅛ ...	3 2 0	0 0 2	0...Apr. 1884
253000	St. John del Rey*†(£5 Stock and multiple dealt in) ...		65	70 ...	5 p.c. for half-year, June 1882		
160000	Tambracherry,* g, Wynaad	1 0 0	— ...	...	0 0 6	0 0 0	6...Aug. 1882
625000	Tharsis,* c, sul, Spain (587330 issued)†	2 0 0	6¼... 5¼	6 ...	6 18 6	0 0 11	0...May 1883
14000	Tolima,* g, s, Colombia (A shares) ...	5 0 0	9 ... 7½	8 ...	4 16 6	0 0 10	0...June 1884
6000	Ditto (B shares)	5 0 0	7 ... 6	7 ...	— ...	— ...	... —
25000	Victoria* (London), g, Australia ...	1 0 0	— ...	...	0 13 10	0 0 0	8...Feb. 1881
124221	United Mexican,*†‖ s, Mexico	9 17 6	4½... 3¾	4¼ ...	0 2 6	0 0 2	6...May 1884
100000	Victorine (Nevada, U.S.) Deb. Bds...	1 0 0	— ...	...	0 2 0	0 0 0	6...June 1882
15000	Western Andes, s, Colombia	5 0 0	5¼...	4¾ 5¼	4 5 9	0 0 2	6...Oct. 1883
2100	W. Prussian (5500 pref. sh. £10 pd.)	10 0 0	— ...	...	4 2 0	0 0 8	0...Apr. 1881
64800	Yorke Pen., c, South Aust. Pref.†...	1 0 0	⅜...	⅜ ⅞	0 3 0	0 0 3	0...May 1882

§ Have made calls since last dividend was paid.

NON-DIVIDEND BRITISH MINES.

Shares.		Paid.	Last wk.	Clos. pr.
25000	Aberduna,* l, Denbigh	1 10 0	— ...	
12000	Anderton, †, c, i, Devonshire	1 2 6	¾... ¾	¾
12000	Assheton, i, Carnarvonshire*	5 0 0	— ...	
10000	Brada, * l, Isle of Man	1 0 0	— ...	
30000	British,* s-l, bl, Wrexham	1 0 0	— ...	
20000	British Manganese Company*	1 0 0	.. —	
20000	Bwich United,* l, Cardigan	1 0 0	— ...	
12000	Collacombe Consols, c, bl, Lamerton	0 2 6	— ...	
50000	Carr-Camborne,* †, c, Camborne ...	1 0 0	— ...	
37500	Carnarvonshire Cons.,* l, Llanrwst.	2 0 0	⅛... ⅛	⅛
6400	Cashwell,* l, Cumberland†	2 19 0	1¾...1¾	1¾
6000	Cathedral, c, †, Gwennap	1 7 6	⅛...	
20000	Central Foxdale,* l, Isle of Man.....	1 17 6	— ...	
25000	Coed-y-Fedw&Pant-y-Buarth,* l	1 0 0	1¼... 1	1¼
2450	Cook's Kitchen, †, Illogan†	35 14 9	12½... 10	12½
50000	Creigiog,* l, bl, Denbighshire	0 17 0	⅞... ⅝	⅞
38400	Crook Burn,* l, Cumberland	0 17 0	— ...	
48728	D'Eresby Mountain, l, bl, Llanrwst.	0 10 0	⅜... ⅜	⅜
12000	Derwent,* l, Durham	4 0 0	— ...	
60000	Devon Friendship,* c, ars, Tavistock	1 0 0	2s... 1s.	2s.
12000	Devon Great United* (2l. shares) ...	1 17 6	¾... ⅝	⅝
50000	Drakewalls,* †, c Calstock	0 15 0	— ...	
50000	Duchy Peru,* bl, l, s, Cornwall	1 0 0	1⅛...1⅛	1⅛
12000	East Blue Hills, †, St. Agnes	0 5 0	⅜... ⅛	⅜
6000	East Botallack, †, St. Just	1 2 6	1⅜...	
6144	East Caradon, c, St. Cleer]	5 1 0	⅜... ⅛	⅜
4000	East Chiverton, c, Perranzabuloe ...	10 17 3	— ...	
30000	E. Craven Moor,* l, Pateley Bridge	1 0 0	— ...	
15000	East Devon Cons.,* c, Buckfastligh.	2 0 0	⅜... ⅛	⅜
20000	East Long Rake,* l, Wales	1 0 0	— ...	
25500	East Roman Gravels,* l, Salop	1 0 0	⅜... 1/16	⅛
18000	East Van, †, Llanidloes*	5 0 0	— ...	
2048	East Wheal Lovell, †, Helston	18 18 6	⅜... ⅛	⅜
100000	East Wheal Rose,* s-l, Newlyn East	1 0 0	⅜... 1/16	3/16
25000	Ecton,* c, Wetton	1 0 0	1¾... 1¼	1½
12500	Frongoch,* l, Cardgn (11000 sh.lss.)	2 0 0	⅝... ⅜	⅜
12000	Gawton,* c, Tavistock	2 5 0	⅜... ¼	⅜
40000	Glasg. Car...* (30000sh. £1 pd., 10000	18s. pd.]	— ...	
30000	Gobbett,* †, Devon	1 0 0	1 ... ⅞	1
10000	Goddards,* l, o, Carnarvon	1 0 0	— ...	
32000	Goginan,* l, Cardiganshire	1 2 0	⅜... ⅛	⅜
25000	Goodevere, †, St. Cleer	1 0 0	⅛... 1/16	⅛
8500	Gorsedd and Merllyn Con., †, Flint.	2 10 0	— ...	
6000	Great West Chiverton, †, St. Agnes.	0 8 6	⅛... ⅜	⅛
90000	Great W. Shepherds* l, Cornwall ...	1 0 0	.. 1/16 .. 1	1 1/16
20000	Grogwinion, †, Cardigan*	2 0 0	— ...	
10000	Gwern-y-Kynydd,* s-l, Flint(pref.)	4 0 0	1 ... ¼	1
70000	Gwydyr Amal.* l, bl, Carnarvon ...	1 0 0	— ...	
8400	Hardshins,* l, Westmore. (10s. sh.)	0 2 6	1/16... ⅛	3/16
12000	Herodsfoot, †, near Liskeard†	1 6 0	⅛... ⅛	⅛
18000	Hingston Down, c, Calstock*†	0 13 0	⅛... ⅛	⅛
35000	Holway Consols,* l, Flintshire	1 0 0	— ...	
25000	Kit Hill Gt. Cons.* c, ars-m, (2l. sh.)	1 2 6	⅛... 1/16	⅛
15000	Lady Ann,* s-l, Llanarmon	1 0 0	— ...	
15000	Llandegla,* l, Wales	1 0 0	— ...	
5120	Lovell, †, Wendron	0 16 0	⅜... ⅛	⅜
9000	Marke Valley, c, Linkinhorne]	7 12 6	⅛... ⅛	⅛
6000	Medlyn Moor, †, Wendron	3 15 0	— ...	
8000	Mona,* c, Anglesea	5 0 0	— ...	
20000	Mona Consols,* c, Anglesea	1 0 0	⅛... ..	
20000	Mostyn Consols,* s-l, Flint.	1 0 0	1⅛ ..	
12000	Morfa Du, s, g, s, Anglesea*	1 0 0	— ...	
80000	Mounts Bay,* c, †, Breage	1 0 0	1/16... 1/16	1/16
6144	Mount Carbis, †, c, Redruth	1 15 0	1½... 1¼	1¼
12000	New Caradon, c, St. Cleer	0 5 0	⅛... ⅛	1/16
2400	New Cook's Kitchen, †, Illogan	10 5 6	1⅛... ⅞	1
8000	New Dolcoath, †, c, Camborne*	3 0 0	— ...	
10000	New Holmbush,* †, c, Callington ...	3 0 0	— ...	
6000	New Kitty, †, St. Agnes	1 2 0	1⅛... 1	1⅛
25000	New Langford,* s, c, Callington.....	0 2 6	⅛... ⅛	1/16
15000	New Redmoor,* var, Callington	1 5 0	— ...	
17500	New Terras,* †, St. Austell	2 0 0	⅜... ⅛	⅜
3500	New Tincroft,* †, Lelant	6 0 0	— ...	
12000	New Trumpet,* †, Wendron	1 0 0	1⅛... 1	1⅛
30000	New Van Cons. & Glyn,* †, ...	7 0 0	⅛... ⅜	⅛
12000	New West Caradon, c, Liskeard	0 7 0	⅛... ⅛	1/16
3000	New Wheal Peevor, †, Redruth	0 10 0	— ...	
13000	North Blue Hills, †, St. Agnes.....	0 2 6	1/8...1s.1s.6d.	
5328	North Busy, †, c, Scorrier ‖	2 4 6	⅛... ⅛	⅛
10000	N. D'Eresby Mount..* l, bl, Carnarv.	1 0 0	— ...	
25000	North Goginar,* l, Cardiganshire...	1 0 0	— ...	
8400	North Green Hurth,*	1 0 0	1 ... ⅛	1
25000	North Grogwinion,* s-l, Cardigshr ..	1 0 0	⅜... ¼	⅜
12000	North Herodsfoot, †, Liskeard.....	0 13 6	— ...	
2000	North Levant, †, c, St. Just	13 16 0	— ...	

NON-DIVIDEND MINES —*continued.*

Shares.		Paid.	Last wk.	Clos. pr.
50000	North Molton,* c, mn, s, Devon.....	1 0 0	— ...	
6000	North Penstruthal, †, c, Gwennap...	3 9 0	⅛... ⅛	⅛
2936	North Treskerby, c, St. Agnes	1 0 0	— ...	
8000	Northern,* l, Durham	8 17 10	— ...	
40000	Okel Tor,* †, c, a, Calstock	1 0 0	— ...	
80000	Old Shepherds s-l, Cornwall	1 0 0	1/32...	⅛
60000	Owen Vean & Tregur.,* †, c, Marazion	1 0 0	1⅛... 1	1⅛
45000	Parys Corporation,* c, Anglesea ...	1 0 0	1s ..	6d. 1s
7500	Pateley Bridge, l, Yorkshire	1 0 0	— ...	
6000	Pedn-an-drea, †, Redruth.....	4 10 0	⅛... ⅜	⅜
6000	Pennant, l, bar, North Wales*	5 0 0	5 ...	4⅛ 5
20000	Penegarreg, l, Carmarthenshire.....	1 0 0	— ...	
15000	Pen-yr-Orsedd,* l, Flintshire.....	1 0 0	⅛... ¼	⅛
15000	Perran Consols,* s-l	1 0 0	— ...	
12000	Perran Wheal Alfred, c	0 2 6	— ...	
10000	Polberro, †, St. Agnes.....	0 2 0	2 ... 1¼	1½
6000	Polcrebo, †, Crowan	0 18 6	1¼... 1⅛	1½
4516	Polrose, †, Cornwall	1 12 9	⅜... ⅜	⅜
10000	Port Nigel Syn,* s-l, Carnar.(4000 is.)	0 15 0	— ...	
13000	Pr. Patrick,* s-l, (als. 12000 pf. 10 p.c)	1 0 0	— ...	
12000	Prince of Wales, c, s, Calstock	1 8 0	⅛... ¼	⅛
38000	Russell United,* c, Tavistock	0 15 6	⅛... ⅜	⅛
5000	Silver Hill,* Callington	1 0 0	— ...	
5000	...* l, bl, Whitford	1 0 0	1 ... ⅜	1
40000	Sortridge, c, ...bridge	1 0 0	⅛... 1/16	1⅛
50000	South Caradon,* c, St. Cleer†.....	0 15 0	1/32... 1/16	1/32
6000	South Carbis, †, c, Redruth	0 10 0	1⅛... 1	1⅛
42000	So. Devon Unit..* c, Buckfastleigh,	1 0 0	⅜... ¼	⅜
5000	South Dolcoath, c, †, Illogan	0 19 0	1 ... ¾	1
6000	South Kitty, †, St. Agnes	0 10 0	⅛... ⅛	⅛
6000	South Penstruthal, †, c, Gwennap...	3 16 6	⅜... ⅜	⅜
30000	So. Phœnix&Caradon,*†, c, Linkinhn.	1 0 0	⅛... 1/16	⅛
6000	South Tolcarne, †, c, Camborne.....	5 11 6	1⅛... 1	1⅛
2043	South Wheal Crofty, c, Illogan.....	7 4 6	3⅛... ¼	1½
6000	South Wheal Frances, †, Illogan†..	9 19 4	8½ .. 8	8½
30000	Standard,* l, bl., Llanrwst	1 0 0	1⅛... ⅜	1⅛
40000	Tamar, s-l, Bearalston*	1 0 0	— ...	
12000	Trebartha Lemarne, †, Northill	0 6 3	— ...	
6000	Tregembo, †, c, Cornwall	4 0 0	— ...	
50000	Tregontrees and Old Polgooth Con..	1 0 0	— ...	
100000	Treavean,* †, c, Gwennap.....	1 0 0	⅛... ⅜	⅛
6000	Trevaunance, †, St. Agnes	0 6 0	2⅛... 1⅞	2⅛
1000	Vaughan,* l, Cardiganshire.....	10 0 0	— ...	
50000	Weardale,* l, Northumber. (4l. share)	1 2 6	1⅛ .. 1⅛	1⅛
12000	West Assheton, i, Carnarvon	1 0 0	— ...	
12000	West Caradon, c, St. Cleer	0 9 3	4s... 2s.	4s.
30000	West Cornwall,* †, Cornwall	1 0 0	1⅛... 1	1⅛
3000	W. Craven Moor, †, Pateley Bridge*	10 0 0	— ...	
12000	West Crebor, c, Tavistock	0 11 6	⅛... ⅛	⅛
10240	West Devon Consols, c, Calstock ...	1 2 0	⅛... ⅛	⅛
10000	West Godolphin, †, c, Breage	1 3 6	1⅛... 1	1⅛
12000	West Gonamena, c, St. Cleer	0 1 0	⅛... 1/16	⅛
20000	West Lisburne,* †, Cardigan	1 0 0	⅛... ⅛	⅛
3000	West Mary Ann, †, Menheniot	1 18 0	⅛... ⅛	⅛
20000	W. Pateley Bridge, l, Yorkshire.....	1 0 0	— ...	
12000	West Phœnix, †, Linkinhorne.....	1 5 0	⅛... ⅛	⅛
6000	West Polbreen, †, c, St. Agnes	0 11 0	⅛... ⅛	⅛
5190	West Poldice, St. Day]	7 10 0	⅛... ⅛	⅛
6141	West Wheal Frances, †, Illogan] ...	14 10 1	5⅛ .. 5	5 ex.d.
3000	West Wheal Peevor, †, Redruth.....	4 10 0	⅛... ⅛	⅛
2400	West Wheal Seton, c, Camborne†§...	20 0 0	5½... 4¼	5½
6144	Wheal Basset, c, Illogan]	9 9 0	3⅛... 3	3½
4000	Wheal Benny, †, c, Latchley	5 0 0	— ...	
3000	Wheal Boys, †, Redruth	1 3 6	— ...	
50000	Wheal Castle,* c, †, St. Just.....	1 0 0	1⅛... 1	1⅛
12000	Wheal Coates, †, St. Agnes.....	0 10 6	⅛... ⅛	⅛
2585	W. Comf., & No. Tres., †, c, Gwennap	2 2 0	1 ... ¼	1
50000	Wheal Elizabeth,* †, Cornwall	1 0 0	— ...	
12288	Wheal Jane, †, Kea]	3 6 0	⅛... 1/16	⅛
12000	Wheal Jewell, c, St. Hilary.....	1 0 6	⅛... ⅛	⅛
25000	Wh. Hony and Trelawny, s-l, Lisk.	2 0 0	— ...	
12000	Wheal Lusky, †, Callington	0 3 9	⅛... ⅛	⅛
2000	Wheal Owles, †, St. Just]	7 3 0	— ...	
30000	Wh. Silver & Lanteglos,*s-l, Cameifd.	1 0 0	1 ... ¼	1
6000	Wheal Sisters, †, Lelant	4 2 6	1⅛... ⅛	⅛
4096	Wheal Uny, †, c, Redruth	19 19 6	⅛... ⅛	⅛
21866	Wye Valley, †, Montgomery.*	1 0 0	— ...	
60000	Yeoland Consols,* †, Devonshire.....	0 12 6	⅛... ⅛	⅛
4000	Ystwith,* l, Cardigan	1 0 0	— ...	

bl, blende; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate *s-l*, silver-lead; *t*, tin; *z*, zinc; *i*, iron; *a*, arsenic; *d*, diamond. Limited Liability Companies; † quoted on the Stock Exchange. ‖ have paid dividends.

NON-DIVIDEND FOREIGN MINES; FOREIGN AND MISCELLANEOUS STOCKS; TRAMWAYS; INSURANCE COMPANIES; GAS, IRON AND COAL, WAGON COMPANIES, &c.

NON-DIVIDEND FOREIGN MINES.

Shares.		Paid.	Clos. pr.
50000	Akankoo,* g, Gold Cst. (100000 lss.)	1 0 0	⅜ ⅝
64280	Anglo-African,* d, Kimberley,†	1 0 0	1⅝ 2⅛
65000	Anglo-Mexican,* (also 325 sh. £1)...	0 0 0	
12000	Arendal, c, Norway	1 0 0	
20000	Asia Minor,* s-l, Lidjessy, Sivas ...	0 15 0	⅛ ⅜
28000	Belt,* c, Lake Sup., (22000 £1 paid)	0 0 0	
40000	Brazilian, g,* Brazil	1 0 0	
200000	British Australian,* g, N. So. Wales	1 0 0	
18000	Broadway,* g, California.....	0 0 0	⅛ ⅜
19000	Buena Ventura,* l, Spain (1s. pd.)...	0 0 0	
80000	Callao Bis,* g, Venezuela	1 0 0	⅛ ⅜
15000	Canada,* g	1 0 0	
82500	Canadian, c, sul,* Canada†.....	0 0 0	⅛ ⅛
23000	Central Jagersfontein Diamond*...	0 0 0	⅛ ⅜
500000	Chile,* g, Venezuela	1 C 0	3/16 5/16
75000	Colar,* g, Mysore	0 15 0	
75000	Colombian Hydraulic, g, Colombia	1 0 0	1/16 3/16
25000	Chontales, g, s, Nicar.*† (108749 lss)	1 0 0	3/16 5/16
2000	Clear Creek, * s, Colorado	1 0 0	
20000	Devala Central,* g, Wynaad	1 0 0	
150000	Devala Moyar,* g, Wynaad†	1 0 0	⅛ ¼
75000	Devala Provident,* g, Wynaad†	0 15 0	
100000	Dingley Dell,* g, Devala, India ...	1 0 0	
125000	Don Pedro North del Rey*	1 0 0	
295148	Eberhardt, s, Nevada*†	1 0 0	⅛ ¼
65000	Eureka,* s, Nevada	1 0 0	
100000	Exchequer, g, s, California*†	1 0 0	
40000	Georgia,* g, United States	10 0 0	
65000	Gold Coast,* g, Wassau	1 0 0	
40000	Gold Hill,* g, North Carolina	1 0 0	
50000	Gold Mining Assn. of Canada* ...	1 0 0	
75000	Great Southern Mysore,* g	1 0 0	
20000	Hoover Hill,* g, North Carolina ...	1 0 0	1/16 ⅛
12000	Hultafall,* l, bl, Orebro, Sweden .	5 0 0	
400000	Indian Consolidated,* g	1 0 0	1/16 3/16
240000	Ind. Glenrock,* g, Wynaad†	1 0 0	1/16 3/16
180000	Iron Gate*cl. chr. Hungary.....	1 0 0	
150000	Isabelle,* g, s, California.....	1 0 0	
100000	I.X.L., g, s, California*	1 0 0	1/16 3/16
50000	Javali, g, Nicaragua*	2 0 0	
125000	Kapanga,* g, New Zealand	1 0 0	1/16 ⅛
150000	Kohinoor,* s, Colorado.....	1 0 0	
500000	Lisbon-Berlyn,* g, South Africa ..	1 0 0	⅛ ⅛
65000	London and California, g*‖	2 0 0	
160000	Michipicoten,* nat. c, Quebec	1 C